



CITY OF HOWARD LAKE

City Council Meeting

*The City of Howard Lake strives to build upon its good neighbor traditions –
A welcoming community for all, supported by vibrant and engaged businesses and community organizations, involved
citizens, and diverse amenities that provide a well-rounded quality of life.*

TENTATIVE AGENDA

March 21, 2022 – 7:00 pm

A. CALL TO ORDER

B. PLEDGE OF ALLEGIANCE

C. APPROVAL OF AGENDA

Any additions, deletions, modifications to the agenda will be done at this time.

D. COUNCIL MEETING MINUTES

- a. Consider Approving Council Meeting Minutes from the February 15th Council Meeting.

E. CITIZEN INPUT

F. COUNCIL/COMMITTEE REPORT

G. DEPARTMENT REPORTS

- a. Howard Lake Wine and Spirits Report

H. CONSENT AGENDA

- a. Consider Accepting all Reports & Payment of Claims.
- b. Consider Declaring Property Surplus and Direct Staff to Dispose of Property.
- c. Consider Resolution Vacating Alley and Adjacent Public Property.

I. PRESENTATIONS, PUBLIC HEARINGS & RELATED APPROVALS

- a. Presentation/Introduction: Jon Kuhlmann, Citizens Alliance Agency [2022 LMCIT Policy]
- b. Public Hearing: EDA Redevelopment Plan.
 - ➔ Consider Resolution Approving EDA Redevelopment Plan
- c. Presentation/Report: Jennifer Selchow, Bolton and Menk, Water Resource Study.

J. NEW BUSINESS

- a. Consider Scope and Fee for Preliminary Engineering Report for 2023 Street & Utility Project.
- b. Consider Date/Time/Fees for Spring City Wide Clean Up Days.
- c. Consider Establishing Absentee Voting Location at City Offices.
- d. Consider Purchase of 2024 Plow Truck.

K. OLD BUSINESS

L. ADMINISTRATOR'S REPORT

M. ADJOURN



CITY OF HOWARD LAKE

Nicholas A. Haggenmiller, City Administrator

625 8TH Avenue - PO Box 736 - Howard Lake, MN 55349

Phone: 320-543-3670 | cityadmin@howard-lake.mn.us | www.howard-lake.mn.us

HOWARD LAKE CITY COUNCIL

Howard Lake City Hall -

February 15, 2022

MEETING MINUTES

COUNCIL PRESENT

Mayor Zimmerman

Tom Kutz

Allan Munson

Gene Gilbert

Jason Deiter

COUNCIL ABSENT

N/A

STAFF PRESENT

Nick Haggenmiller, City Administrator

Meagan Theisen, Assistant City Administrator

ALSO PRESENT

Herald Journal

CALL TO ORDER

Mayor Zimmerman called the meeting to order at 7:00 p.m.

PLEDGE OF ALLEGIANCE

All present recited the Pledge of Allegiance.

APPROVAL OF AGENDA

Haggenmiller stated the addition of Claims and Donations.

Council Member Kutz moved to approve the agenda with the added claims and donations. The motion was seconded by Council Member Gilbert and passed unanimously.

APPROVAL OF MINUTES

The minutes of the January 18th Regular Council Meeting & Work Session were reviewed by Council.

Council Member Kutz moved to approve the minutes. The motion was seconded by Council Member Munson and passed unanimously.

CITIZEN INPUT

No residents addressed the Council.

COUNCIL/COMMITTEE REPORT

Deiter provided update from the Parks and Planning Commission Meeting on February 9th and a review of the Fire Board Meeting in January.

Mayor Zimmerman also mentioned that the American Legion donated \$3000 to the Fire Department.

DEPARTMENT REPORTS

None.

CONSENT AGENDA

a. CONSIDER ACCEPTING ALL REPORTS AND PAYMENT OF CLAIMS

GENERAL FUND	58738-58903	\$164,986.85
PAYROLL	27037-27050, 501868-501917	\$51,727.48
ELECTRONIC	-	\$0
TOTAL		\$216,714.33
AMBULANCE CLAIMS	5819-5826	\$7,318.42
ELECTRONIC	-	\$0
TOTAL		\$7,318.42

b. Consider Declaring Property Surplus and Direct Staff to Dispose of Property.

Council Member Deiter moved to approve the Consent Agenda. The motion was seconded by Council Member Kutz and passed unanimously.

PUBLIC HEARING/PRESENTATION

a. SET PUBLIC HEARING FOR LOCAL BOARD ADJUSTMENT & EQUALIZATION FOR APRIL 18, 2022 AT 6 PM.

Council Member Gilbert moved to approved the proposed date and time for the Local Board of Adjustments meeting. The motion was seconded by Council Member Kutz and passed unanimously.

b. PUBLIC HEARING : GATZ RIGHT-OF-WAY ALLEY VACATION REQUEST

Mayor Zimmerman closed the regular meeting and opened the Public Hearing 7:11 pm.

Haggenmiller reviewed the staff report, highlighting the reason for the request.

Mayor Zimmerman closed the Public Hearing at 7:20 and reopened the regular meeting.

NEW BUSINESS

a. CONSIDER VARIOUS APPROVALS RELATED TO REEDS & RUSHES EVENT CENTER

Haggenmiller reviewed the staff report, highlighting the reason for each individual approval.

Council reviewed the site plan.

Council Member Deiter moved to approve Resolution 22-04 Approving Comprehensive Plan Amendment. The motion was seconded by Council Member Gilbert and passed unanimously.

Council Member Kutz moved to approve Ordinance 22-02 Amendment to Permitted Uses in B1 General Business District. The motion was seconded by Council Member Munson and passed unanimously.

Council Member Kutz moved to approve Ordinance 22-03 Amendment to Zoning Map to Rezone Property. The motion was seconded by Council Member Deiter and passed unanimously.

Haggenmiller reviewed the CUP regulations.

Council Member Gilbert moved to approve Resolution 22-05 Approving CUP and Site Plan for Reeds and Rushes Event Center. The motion was seconded by Council Member Deiter and passed unanimously.

Council Member Kutz moved to Approve Resolution 22-06 Interim Use Permit for Parking Deferment. The motion was seconded by Council Member Gilbert and passed unanimously.

b. CONSIDER USE OF PUBLIC PROPERTY APPLICATION FOR VINTAGE FLEA MARKET

Theisen reviewed the staff report, highlighting the success of the past two events and the work Neil and Jennifer are doing to make the summer's event even more successful.

Neil Wikoff provided more information on past events and what they are hoping for this summer.

Council Member Gilbert moved to approve the use of public property for the Vintage Flea Market. The motion was seconded by Council Member Deiter and passed unanimously.

d. CONSIDER APPROVAL OF SCOPE AND FEE FOR SERVICES FOR ORGANIZATION AND COMPENSATION STUDY

Haggenmiller reviewed the staff report.

Council reviewed the proposed options for the study and agreed that Option 4, Ongoing Maintenance would make the most sense.

Council Member Kutz moved to move forward with Option 4 of the Compensation Study. The motion was seconded by Council Member Munson and passed unanimously.

OLD BUSINESS

None.

ADMINISTRATORS REPORT

None.

ADJOURN

Council Member Kutz moved to adjourn the meeting at 8:27 pm. The motion was seconded by Council Member Gilbert and passed unanimously.

Attest – City Administrator/Clerk

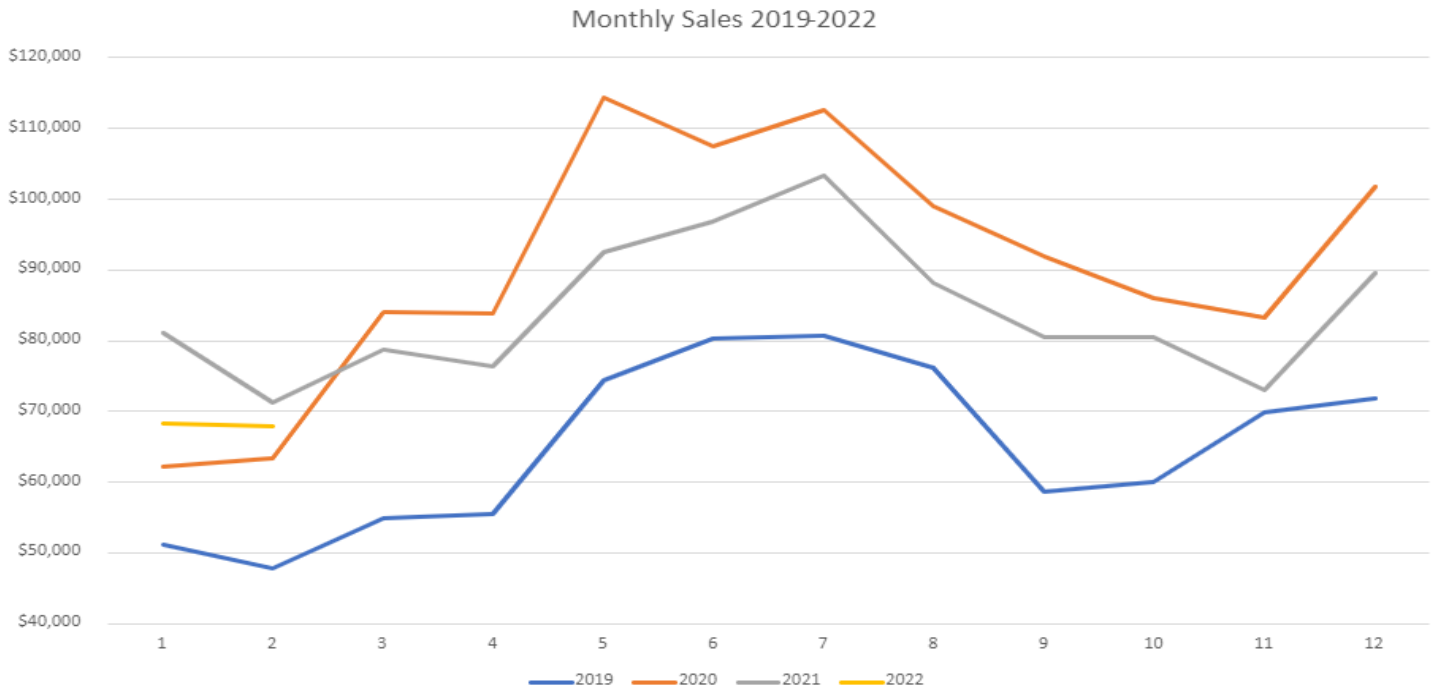
Mayor



Q1 2022 Update



Sales Summary, 2022

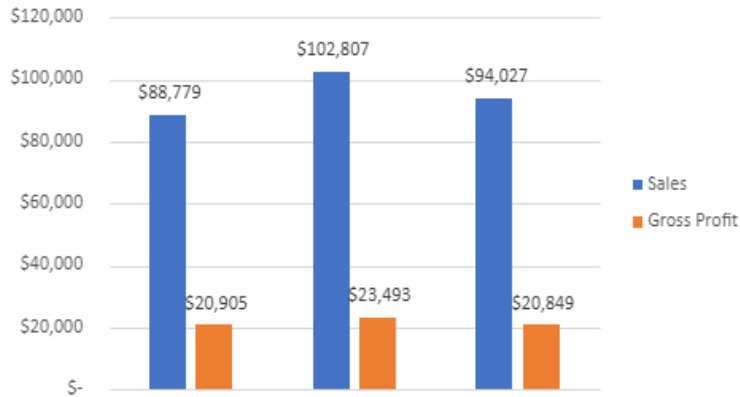


Not 2021 levels, still beating '20, '21 comps

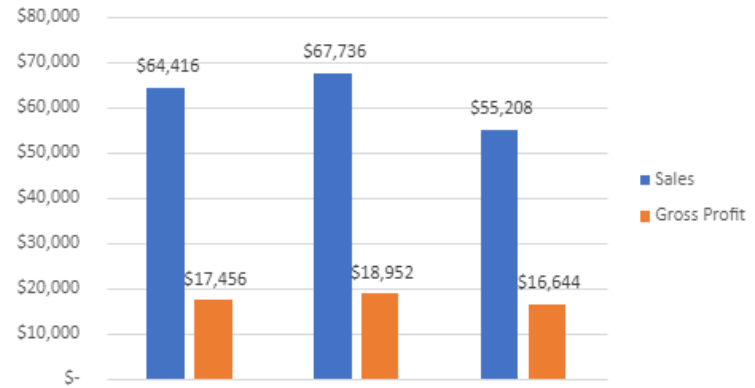
Supply chain issues slightly impacted February. Seeing improvement on out of stocks.

Profitability, 2022

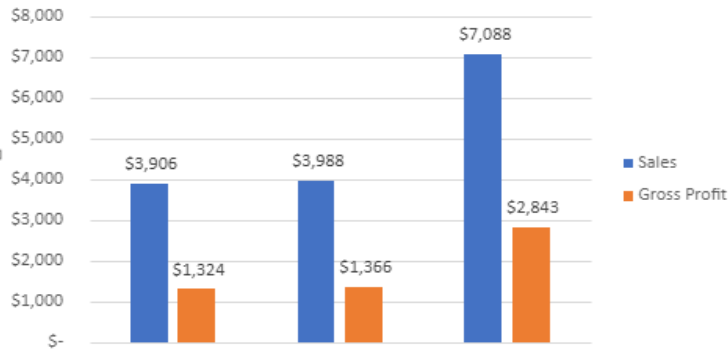
YTD Beer Sales & Profit, 2022-2020



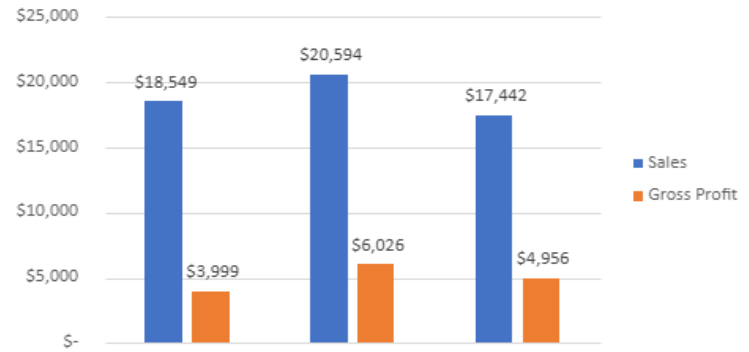
YTD Liquor Sales & Profit, 2022-2020



YTD Misc. Sales & Profit, 2022-2020



YTD Wine Sales & Profit, 2022-2020



Closing out old wine labels, decrease inventory to increase turns/profit

Customer Counts



Similar Patter, lower traffic volume

Sleepy start to year, but trend line is up--currently exceeding 2021 levels

Assuming we follow historic patterns, and 2021 comps begin to be normal, not pandemic inflated, we expect to see number catch--and exceed--last year. Particularly with retail prices increasing +5%

Thank you. Please reach out to me with any questions.

Jason Swanson

Howard Lake Wine & Spirits

Profit & Loss Statement

for the period 1/1/2022 to 1/31/2022

SALES	Mnthly Amnt	YTD Amount	Budget	% of Budget	2021 Mnthly Amt	2021 YTD1Amt	+/- Pr Yr
Liquor	\$ 25,498	\$ 25,498	\$ 397,000	6%	\$ 27,133	\$ 27,133	\$ (1,635)
Beer	\$ 33,367	\$ 33,367	\$ 675,000	5%	\$ 42,681	\$ 42,681	\$ (9,314)
Wine	\$ 10,313	\$ 10,313	\$ 102,000	10%	\$ 12,175	\$ 12,175	\$ (1,862)
Discounts	\$ (2,733)	\$ (2,733)	\$ (18,000)	15%	\$ (2,854)	\$ (2,854)	\$ 122
Misc(Pop/Mixes/Tobaco)	\$ 1,122	\$ 1,122	\$ 33,600	3%	\$ 1,320	\$ 1,320	\$ (198)
Non Tax	\$ 302	\$ 302	\$ 14,400	2%	\$ 561	\$ 561	\$ (258)
Loyalty Program	\$ (9)	\$ (9)	\$ (3,000)	0%	\$ (45)	\$ (45)	\$ 36
On Sale Revenue - SSEC	\$ -	\$ -			\$ -	\$ -	
Other Revenue	\$ 23	\$ 23			\$ 18	\$ 18	
TOTAL SALES	\$ 67,884	\$ 67,884	\$ 1,201,000	6%	\$ 80,988	\$ 80,988	\$ (13,109)
COST OF SALES							
Liquor	\$ 15,487	\$ 15,487	\$ 228,000	7%	\$ 19,252	\$ 19,252	\$ (3,764)
Beer	\$ 26,489	\$ 26,489	\$ 532,000	5%	\$ 32,922	\$ 32,922	\$ (6,433)
Wine	\$ 7,520	\$ 7,520	\$ 66,000	11%	\$ 7,974	\$ 7,974	\$ (454)
Misc Tax	\$ 997	\$ 997	\$ 17,500	6%	\$ 1,284	\$ 1,284	\$ (286)
Misc Non Tax	\$ -	\$ -	\$ 8,500	0%	\$ 179	\$ 179	\$ (179)
Freight	\$ 686	\$ 686	\$ 8,000	9%	\$ 665	\$ 665	\$ 21
TOTAL COST OF SALES	\$ 51,179	\$ 51,179	\$ 860,000	6%	\$ 62,274	\$ 62,274	\$ (11,095)
GROSS PROFIT	\$ 16,706	\$ 16,706					
EXPENSES							
Wages/Benefits	\$ 15,135	\$ 15,135	\$ 171,825	9%	\$ 16,640	\$ 16,640	\$ (1,505)
Consulting	\$ 1,000	\$ 1,000	\$ 12,000	8%	\$ 700	\$ 700	\$ 300
Training & Seminars	\$ -	\$ -	\$ 1,000	0%	\$ -	\$ -	\$ -
Travel	\$ -	\$ -	\$ 1,000	0%	\$ 39	\$ 39	\$ (39)
Dues & Subscriptions	\$ -	\$ -	\$ 1,000	0%	\$ 20	\$ 20	\$ (20)
Cash Short/Over	\$ 13	\$ 13	\$ -		\$ 46	\$ 46	\$ (33)
Credit Card Expense	\$ 1,655	\$ 1,655	\$ 18,000	9%	\$ 2,085	\$ 2,085	\$ (430)
Insurance	\$ -	\$ -	\$ 9,300	0%	\$ -	\$ -	\$ -
Repair & Maintenance	\$ 482	\$ 482	\$ 8,000	6%	\$ 864	\$ 864	\$ (383)
Computer Supplies/Technology	\$ -	\$ -	\$ 4,500	0%	\$ 1,899	\$ 1,899	\$ (1,899)
Utilities	\$ 802	\$ 802	\$ 12,000	7%	\$ 656	\$ 656	\$ 146
Advertising	\$ -	\$ -	\$ 2,500	0%	\$ 1,773	\$ 1,773	\$ (1,773)
Misc	\$ 64	\$ 64	\$ 5,000	1%	\$ 259	\$ 259	\$ (195)
Depreciation	\$ 625	\$ 625	\$ 7,500	8%	\$ 625	\$ 625	\$ -
TOTAL EXPENSES	\$ 19,775	\$ 19,775	\$ 253,625	8%	\$ 25,606	\$ 25,606	\$ (5,831)
PROFIT/(LOSS)	\$ (3,069)	\$ (3,069)			\$ (6,892)	\$ (6,892)	

Howard Lake Wine & Spirits

Profit & Loss Statement

for the period 2/1/2022 to 2/29/2022

SALES	Mnthly Amnt	YTD Amount	Budget	% of Budget	2021 Mnthly Amt	2021 YTD1Amt	+/- Pr Yr
Liquor	\$ 25,537	\$ 51,035	\$ 397,000	13%	\$ 26,843	\$ 53,976	\$ (2,941)
Beer	\$ 35,061	\$ 68,428	\$ 675,000	10%	\$ 37,898	\$ 80,579	\$ (12,151)
Wine	\$ 6,973	\$ 17,286	\$ 102,000	17%	\$ 6,152	\$ 18,327	\$ (1,041)
Discounts	\$ (1,376)	\$ (4,109)	\$ (18,000)	23%	\$ (956)	\$ (3,810)	\$ (299)
Misc(Pop/Mixes/Tobaco)	\$ 1,286	\$ 2,408	\$ 33,600	7%	\$ 966	\$ 2,286	\$ 122
Non Tax	\$ 323	\$ 625	\$ 14,400	4%	\$ 376	\$ 937	\$ (312)
Loyalty Program	\$ -	\$ (9)	\$ (3,000)	0%	\$ (18)	\$ (63)	\$ 54
On Sale Revenue - SSEC	\$ 544	\$ 544			\$ -	\$ -	
Other Revenue	\$ 29	\$ 52			\$ 29	\$ 47	
TOTAL SALES	\$ 68,376	\$ 136,260	\$ 1,201,000	11%	\$ 71,291	\$ 152,279	\$ (16,568)
COST OF SALES							
Liquor	\$ 20,581	\$ 36,068	\$ 228,000	16%	\$ 17,363	\$ 36,615	\$ (547)
Beer	\$ 25,764	\$ 52,252	\$ 532,000	10%	\$ 28,418	\$ 61,340	\$ (9,087)
Wine	\$ 4,811	\$ 12,330	\$ 66,000	19%	\$ 3,608	\$ 11,582	\$ 749
Misc Tax	\$ 490	\$ 1,487	\$ 17,500	8%	\$ 627	\$ 1,911	\$ (424)
Misc Non Tax	\$ -	\$ -	\$ 8,500	0%	\$ -	\$ 179	\$ (179)
Freight	\$ 389	\$ 1,075	\$ 8,000	13%	\$ 764	\$ 1,429	\$ (353)
TOTAL COST OF SALES	\$ 52,034	\$ 103,213	\$ 860,000	12%	\$ 50,780	\$ 113,054	\$ (9,842)
GROSS PROFIT	\$ 16,342	\$ 33,047					
EXPENSES							
Wages/Benefits	\$ 13,339	\$ 28,474	\$ 171,825	17%	\$ 11,546	\$ 28,186	\$ 288
Consulting	\$ 1,000	\$ 2,000	\$ 12,000	17%	\$ 700	\$ 1,400	\$ 600
Training & Seminars	\$ -	\$ -	\$ 1,000	0%	\$ -	\$ -	\$ -
Travel	\$ -	\$ -	\$ 1,000	0%	\$ -	\$ 39	\$ (39)
Dues & Subscriptions	\$ -	\$ -	\$ 1,000	0%	\$ -	\$ 20	\$ (20)
Cash Short/Over	\$ 56	\$ 69	\$ -		\$ 48	\$ 93	\$ (24)
Credit Card Expense	\$ 1,324	\$ 2,979	\$ 18,000	17%	\$ 1,351	\$ 3,436	\$ (457)
Insurance	\$ -	\$ -	\$ 9,300	0%	\$ 7,232	\$ 7,232	\$ (7,232)
Repair & Maintenance	\$ 482	\$ 963	\$ 8,000	12%	\$ 531	\$ 1,395	\$ (432)
Computer Supplies/Technology	\$ -	\$ -	\$ 4,500	0%	\$ 364	\$ 2,263	\$ (2,263)
Utilities	\$ 1,274	\$ 2,076	\$ 12,000	17%	\$ 721	\$ 1,376	\$ 700
Advertising	\$ 143	\$ 143	\$ 2,500	6%	\$ 203	\$ 1,976	\$ (1,833)
Misc	\$ 87	\$ 151	\$ 5,000	3%	\$ 340	\$ 599	\$ (448)
Depreciation	\$ 625	\$ 1,250	\$ 7,500	17%	\$ 625	\$ 1,250	\$ -
TOTAL EXPENSES	\$ 18,331	\$ 38,106	\$ 253,625	15%	\$ 23,660	\$ 49,266	\$ (11,161)
PROFIT/(LOSS)	\$ (1,989)	\$ (5,058)			\$ (3,149)	\$ (10,041)	

CITY OF HOWARD LAKE
CLAIMS & DONATIONS APPROVED
DATE - January 18 - February 15, 2022

GENERAL FUND	CHECKS: 58904 - 59143	\$908,579.44
PAYROLL	27037-27068, 501868 – 501973	111,285.24
ELECTRONIC	1121 - 1157	<u>88,170.91</u>
TOTAL		\$1,108,035.59

AMBULANCE CLAIMS	CHECKS: 5819-5840	\$25,465.24
ELECTRONIC	-	0
TOTAL		\$25,465.24

Approved:

CITY OF HOWARD LAKE

03/18/22 9:28 AM

Page 1

***Check Summary Register©**

Checks 01/18/22-03/21/22

	Name	Check Date	Check Amt	
1010	CITIZEN ALLIANCE			
1121e	INTERNAL REVENUE SERVICE	2/9/2022	\$7,069.62	
1122e	MN DEPT OF REVENUE	2/9/2022	\$1,240.46	
1123e	MN DEPT OF REVENUE	2/17/2022	\$2,347.00	UB January Sales Tax
1124e	MN DEPT OF REVENUE	2/17/2022	\$6,636.00	HLWS Sales Tax January 2022
1125e	INTERNAL REVENUE SERVICE	2/23/2022	\$7,193.72	
1126e	MN DEPT OF REVENUE	2/23/2022	\$1,353.44	
1127e	PERA	2/23/2022	\$6,388.11	
1128e	FURTHER	2/23/2022	\$462.53	
1129e	PERA	2/23/2022	\$6,050.21	
1130e	FURTHER	2/23/2022	\$462.53	
1131e	INTERNAL REVENUE SERVICE	2/24/2022	\$7,116.13	
1132e	MN DEPT OF REVENUE	2/24/2022	\$1,306.25	
1133e	PERA	2/24/2022	\$6,257.45	
1134e	FURTHER	2/24/2022	\$462.53	
1135e	HEARTLAND PYMT SERVICES	2/24/2022	\$1,483.78	
1136e	PSN	2/24/2022	\$762.57	
1137e	MN DEPT OF LABOR AND INDUS	2/24/2022	\$286.15	3rd Qtr 2021 Blding Permit Surcharge
1138e	CUSTOMERS	2/24/2022	\$12.50	Wire Transfer fee
1139e	CITY OF BUFFALO	2/24/2022	\$60.00	ACCT# 26-022950-00
1140e	CITIZENS ALLIANCE BANK	2/24/2022	\$30.00	ACH Origination Fee
1141e	LS WEEKEND CASH	2/24/2022	\$1,500.00	
1142e	AUTHNET GATEWAY BILLING	2/24/2022	\$25.00	
1143e	RADIANT SYSTEMS	2/24/2022	\$146.33	NCR
1144e	MN DEPT OF REVENUE	3/7/2022	\$1,508.00	UB February Sales Tax
1145e	MN DEPT OF REVENUE	3/7/2022	\$6,616.00	February Sales Tax HLWS
1146e	HEARTLAND PYMT SERVICES	3/8/2022	\$1,153.36	
1147e	AUTHNET GATEWAY BILLING	3/8/2022	\$25.00	
1148e	LS WEEKEND CASH	3/8/2022	\$2,000.00	
1149e	RADIANT SYSTEMS	3/8/2022	\$145.95	
1150e	CITY OF BUFFALO	3/8/2022	\$60.00	ACCT# 26-022950-00
1151e	CITIZENS ALLIANCE BANK	3/8/2022	\$109.00	Insuffienct funds - Adlana Johnson
1152e	PSN	3/8/2022	\$839.04	
1153e	MN DEPT OF REVENUE	3/8/2022	\$0.03	
1154e	INTERNAL REVENUE SERVICE	3/9/2022	\$8,672.48	
1155e	MN DEPT OF REVENUE	3/9/2022	\$1,381.70	
1156e	PERA	3/9/2022	\$6,545.51	
1157e	FURTHER	3/9/2022	\$462.53	
27037	GOEPFERT, THOMAS	1/28/2022	\$635.25	
27038	MILLER, EDWARD M	1/28/2022	\$200.38	
27039	BONNICK, STEVEN	1/28/2022	\$784.49	
27040	GOEPFERT, THOMAS	2/11/2022	\$321.23	
27041	BOBROWSKE, KURT	2/11/2022	\$253.96	
27042	DIERS, CHRISTOPHER	2/11/2022	\$23.09	
27043	DRUSCH, JACOB D	2/11/2022	\$313.71	
27044	DRUSCH, JOEY	2/11/2022	\$46.17	
27045	MAGES, ALEX	2/11/2022	\$46.17	
27046	PETERSON, JEREMY	2/11/2022	\$160.48	
27047	SHEROD, JOSEPH L.	2/11/2022	\$46.17	
27048	STOLL, ERIC	2/11/2022	\$366.72	
27049	WIECH, KYLE	2/11/2022	\$69.26	
27050	MILLER, EDWARD M	2/11/2022	\$210.97	
27051	GOEPFERT, THOMAS	2/25/2022	\$455.91	
27052	Arnold, Kayla	2/25/2022	\$579.96	
27053	CHRISTIAN, HAYDEN	2/25/2022	\$46.17	

CITY OF HOWARD LAKE

03/18/22 9:26 AM

Page 2

***Check Summary Register©**

Checks 01/18/22-03/21/22

	Name	Check Date	Check Amt	
27054	MILLER, EDWARD M	2/25/2022	\$187.14	
27055	BONNICK, STEVEN	2/25/2022	\$674.58	
27056	DEITER, JASON	3/11/2022	\$1,154.37	
27057	KUTZ, TOM	3/11/2022	\$1,154.37	
27058	ZIMMERMAN, PETER A	3/11/2022	\$1,818.12	
27059	GOEPFERT, THOMAS	3/11/2022	\$334.71	
27060	ARNOLD, KAYLA	3/11/2022	\$159.71	
27061	BOBROWSKE, KURT	3/11/2022	\$92.35	
27062	DRUSCH, JACOB D	3/11/2022	\$371.48	
27063	MAGES, ALEX	3/11/2022	\$275.21	
27064	PETERSON, JEREMY	3/11/2022	\$138.52	
27065	SHEROD, JOSEPH L.	3/11/2022	\$89.26	
27066	STOLL, ERIC	3/11/2022	\$325.54	
27067	WIECH, KYLE	3/11/2022	\$236.71	
27068	MILLER, EDWARD M	3/11/2022	\$250.70	
58904	AR ENGH HEATING & AIR	1/18/2022	\$311.12	
58905	BELLBOY CORPORATION	1/18/2022	\$3,718.30	
58906	BREAKTHRU BEVERAGE	1/18/2022	\$1,327.39	
58907	CAPITOL BEVERAGE SALES	1/18/2022	\$896.90	Credit
58908	COKATO TRANSPORTATION, IN	1/18/2022	\$79.00	
58909	DAHLHEIMER BEVERAGE, LLC	1/18/2022	\$4,895.67	
58910	DAKOTA SUPPLY GROUP	1/18/2022	\$15,480.30	
58911	FIRST SECURITY BANK HENDRI	1/18/2022	\$33,910.00	Interest Bond 2021A
58912	FURTHER	1/18/2022	\$2.40	
58913	GOPHER STATE ONE-CALL, INC	1/18/2022	\$50.00	
58914	JOE'S SPORT SHOP	1/18/2022	\$1,709.75	
58915	JOHNSON BROTHERS LIQUOR C	1/18/2022	\$1,724.57	
58916	LEAGUE OF MINN CITIES	1/18/2022	\$540.00	
58917	LOCHER BROS, INC	1/18/2022	\$2,288.70	
58918	MARCO	1/18/2022	\$324.73	
58919	MEDIACOM LLC	1/18/2022	\$254.90	
58920	MIDWEST MACHINERY CO	1/18/2022	\$21.47	
58921	MN VALLEY TESTING LAB	1/18/2022	\$43.00	
58922	PAUMEN COMPUTER SERVICES	1/18/2022	\$785.50	
58923	PHILLIPS WINE & SPIRITS	1/18/2022	\$1,873.49	
58924	PLUNKETT'S PEST CONTROL	1/18/2022	\$30.10	
58925	PREMIUM WATERS, INC	1/18/2022	\$80.86	
58926	SOUTHERN GLAZER WINE & SPI	1/18/2022	\$858.15	
58927	US BANK	1/18/2022	\$80,428.75	2018A Interest
58928	VINOCOPIA, INC	1/18/2022	\$92.71	
58929	WASTEWATER COMMISSION	1/18/2022	\$58,029.35	Nov 2021 Less Forsmans
58930	WINE MERCHANTS	1/18/2022	\$1.59	
58931	WRIGHT COUNTY HIGHWAY DE	1/18/2022	\$8,608.28	Salt
58932	WRIGHT HENNEPIN ELECTRIC	1/18/2022	\$902.00	
58933	XCEL ENERGY	1/18/2022	\$231.09	
58934	ZITZLOFF SNOW PLOWING	1/18/2022	\$205.00	
58935	ARCTIC GLACIER ICE, INC	2/15/2022	\$160.17	
58936	BELLBOY CORPORATION	2/15/2022	\$1,825.80	
58937	BREAKTHRU BEVERAGE	2/15/2022	\$4,658.40	
58938	CAPITOL BEVERAGE SALES	2/15/2022	\$1,929.10	
58939	DAHLHEIMER BEVERAGE, LLC	2/15/2022	\$9,087.47	
58940	JOHNSON BROTHERS LIQUOR C	2/15/2022	\$5,490.39	
58941	LOCHER BROS, INC	2/15/2022	\$5,281.11	
58942	PAUSTIS WINE COMPANY	2/15/2022	\$858.00	
58943	PHILLIPS WINE & SPIRITS	2/15/2022	\$2,195.37	

CITY OF HOWARD LAKE

03/18/22 9:26 AM

Page 3

***Check Summary Register©**

Checks 01/18/22-03/21/22

	Name	Check Date	Check Amt	
58944	RED BULL DISTRIBUTION CO, IN	2/15/2022	\$147.00	
58945	SOUTHERN GLAZER WINE & SPI	2/15/2022	\$6,995.81	
58946	VIKING BEVERAGES.	2/15/2022	\$458.75	
58947	VINOCOPIA, INC	2/15/2022	\$280.00	
58948	WINE MERCHANTS	2/15/2022	\$161.59	
58949	ANDYS PLUMBING LLC	2/15/2022	\$979.00	
58950	AQUATENNIAL AMBASSADOR O	2/15/2022	\$1,200.00	Maddie Marschel
58951	ARNOLDS OF KIMBALL, INC	2/15/2022	\$152.81	
58952	ASSURED SECURITY	2/15/2022	\$1,697.50	
58953	BELLBOY CORPORATION	2/15/2022	\$2,770.51	
58954	BIRCHDALE FIRE & SECURITY, L	2/15/2022	\$144.96	
58955	KEITH BOBROWSKE	2/15/2022	\$65.00	Feburary Cell Allowance
58956	BOLTON & MENK, INC	2/15/2022	\$6,767.50	
58957	BREAKTHRU BEVERAGE	2/15/2022	\$3,199.11	
58958	CAPITOL BEVERAGE SALES	2/15/2022	\$3,447.04	
58959	CARLSONSV CPAS & ADVISORS	2/15/2022	\$90.00	
58960	CENTERPOINT ENERGY	2/15/2022	\$3,411.47	
58961	CENTRAL SQUARE TECHNOLOG	2/15/2022	\$2,163.20	
58962	CENTURYLINK	2/15/2022	\$401.85	
58963	CINTAS	2/15/2022	\$920.19	
58964	COURI, & RUPPE, P.L.L.P.	2/15/2022	\$1,206.25	
58965	DAHLHEIMER BEVERAGE, LLC	2/15/2022	\$1,753.47	
58966	FINKEN WATER CENTERS	2/15/2022	\$5.00	
58967	FURTHER	2/15/2022	\$2.40	
58968	GERTKEN BROS., INC	2/15/2022	\$12,307.62	Central Park - Final Payment
58969	GOPHER STATE ONE-CALL, INC	2/15/2022	\$8.10	
58970	NICK HAGGENMILLER	2/15/2022	\$365.00	CELL PHONE - February
58971	HALVORSON LEGAL	2/15/2022	\$1,843.60	
58972	HAWKINS, INC	2/15/2022	\$20.00	
58973	HERALD JOURNAL PUBLISHING	2/15/2022	\$36.80	
58974	HL PIT STOP	2/15/2022	\$1,027.48	
58975	HOWARD LAKE FOODS	2/15/2022	\$294.37	
58976	JOE'S SPORT SHOP	2/15/2022	\$1,145.96	
58977	JOHNSON BROTHERS LIQUOR C	2/15/2022	\$1,436.45	
58978	KURITA AMERICA INC	2/15/2022	\$2,800.00	
58979	MYRA LAWAY	2/15/2022	\$65.00	CELL PHONE - February
58980	LITTLE FALLS MACHINE, INC	2/15/2022	\$1,146.95	
58981	MARCO	2/15/2022	\$382.64	
58982	MARCO TECHNOLOGIES LLC	2/15/2022	\$452.88	
58983	DEBRA MCALPINE	2/15/2022	\$65.00	
58984	MEDIACOM LLC	2/15/2022	\$218.17	
58985	MEI TOTAL ELEVATOR Solutio	2/15/2022	\$951.84	
58986	MENARDS-BUFFALO	2/15/2022	\$130.38	
58987	JARED MERGES	2/15/2022	\$65.00	Cell Allowance February
58988	METRO WEST INSPECTION SER	2/15/2022	\$1,506.39	
58989	MN PEIP	2/15/2022	\$15,184.38	
58990	MN VALLEY TESTING LAB	2/15/2022	\$48.00	
58991	MUNSON LAKES NUTRITION	2/15/2022	\$6.43	
58992	NAPA AUTO PARTS COKATO	2/15/2022	\$218.46	
58993	536600-NCPERS GROUP LIFE IN	2/15/2022	\$32.00	
58994	NELSON ELECTRIC MOTOR REP	2/15/2022	\$1,480.00	
58995	NORTH FORK CUSTOM MEATS L	2/15/2022	\$25.00	
58996	NORTHWEST ASSOC CONSULT	2/15/2022	\$2,125.80	
58997	PAUMEN COMPUTER SERVICES	2/15/2022	\$2,926.70	
58998	PAUSTIS WINE COMPANY	2/15/2022	\$316.25	

CITY OF HOWARD LAKE

03/18/22 9:26 AM

Page 4

***Check Summary Register©**

Checks 01/18/22-03/21/22

	Name	Check Date	Check Amt	
58999	PHILLIPS WINE & SPIRITS	2/15/2022	\$6,011.54	Credit
59000	PLUNKETT'S PEST CONTROL	2/15/2022	\$232.80	
59001	PRECISION WELDING LLC	2/15/2022	\$340.00	
59002	CLAYTON PRESTIDGE	2/15/2022	\$65.00	CELL PHONE - Febraury
59003	RUSSELL SECURITY RESOURC	2/15/2022	\$288.50	
59004	SPRINT	2/15/2022	\$308.47	
59005	STREICHER'S	2/15/2022	\$57.99	
59006	JASON SWANSON	2/15/2022	\$1,000.00	
59007	TEAM LABORTATORY CHEMICA	2/15/2022	\$155.00	
59008	THEISEN, MEAGAN	2/15/2022	\$215.00	CELL - February
59009	T-MOBILE	2/15/2022	\$108.10	
59010	ULINE	2/15/2022	\$3,308.28	
59011	UPBEAT INC	2/15/2022	\$18,555.83	
59012	VERIZON	2/15/2022	\$80.02	
59013	VERIZON CONNECT NWF, INC	2/15/2022	\$97.14	
59014	VICTOR TOWNSHIP	2/15/2022	\$1,500.00	STREET MAINTENCE - 70TH STREET
59015	VISA	2/15/2022	\$5,130.42	
59016	WATCH GUARD	2/15/2022	\$137.00	
59017	WEX BANK	2/15/2022	\$583.47	
59018	WINE MERCHANTS	2/15/2022	\$472.75	
59019	WRIGHT COUNTY JOURNAL PR	2/15/2022	\$192.00	ANNUAL SUBSCRIPTION RENEWAL
59020	XCEL ENERGY	2/15/2022	\$7,641.07	
59021	HOWARD LAKE POSTMASTER	2/23/2022	\$330.00	February UB billing
59022	BRASS FOUNDRY BREWING CO	3/1/2022	\$197.84	
59023	CAPITOL BEVERAGE SALES	3/1/2022	\$5,656.36	
59024	DAHLHEIMER BEVERAGE, LLC	3/1/2022	\$4,886.41	
59025	JOHNSON BROTHERS LIQUOR C	3/1/2022	\$3,425.38	
59026	LOCHER BROS, INC	3/1/2022	\$6,497.71	
59027	PHILLIPS WINE & SPIRITS	3/1/2022	\$1,258.15	
59028	VIKING BEVERAGES.	3/1/2022	\$113.85	
59029	VINOCOPIA, INC	3/1/2022	\$349.70	
59030	AMERICAN SOLUTIONS FOR BU	3/1/2022	\$858.18	
59031	BANYON DATA SYSTEMS INC	3/1/2022	\$2,910.00	
59032	BOARMAN KROOS VOGEL GRO	3/1/2022	\$8,120.50	Library
59033	KEITH BOBROWSKE	3/1/2022	\$65.00	CELL ALLOWANCE - MARCH
59034	BOLTON & MENK, INC	3/1/2022	\$13,984.88	
59035	CENTERPOINT ENERGY	3/1/2022	\$4,675.43	
59036	CENTURYLINK	3/1/2022	\$401.65	
59037	COKATO LICENSING	3/1/2022	\$96.25	20006 CHEV SILV
59038	COKATO PARTS CITY	3/1/2022	\$0.00	
59039	MARK CUSTER	3/1/2022	\$4,500.00	2022 1st Quarter Payment
59040	DAILEY DATA & ASSOCIATES, IN	3/1/2022	\$92.00	
59041	EARTHLINK INC	3/1/2022	\$25.90	
59042	NICK HAGGENMILLER	3/1/2022	\$458.47	CELL PHONE - MARCH
59043	HAWKINS, INC	3/1/2022	\$20.00	
59044	HERALD JOURNAL PUBLISHING	3/1/2022	\$54.00	Annual Subscription
59045	HOWARD LAKE ROYALTY	3/1/2022	\$25.00	Daddy/Daughter Dance
59046	JLR GARAGE DOOR SERVICE, I	3/1/2022	\$300.00	
59047	JOE'S SPORT SHOP	3/1/2022	\$1,456.72	
59048	MYRA LAWAY	3/1/2022	\$80.57	CELL PHONE - MARCH
59049	DEBRA MCALPINE	3/1/2022	\$65.00	March Allowance
59050	MEDIACOM LLC	3/1/2022	\$469.30	
59051	MENARDS-BUFFALO	3/1/2022	\$78.96	
59052	JARED MERGES	3/1/2022	\$97.20	Cell Allowance - March
59053	MIDWEST PLAYSCAPES, INC	3/1/2022	\$3,548.61	

CITY OF HOWARD LAKE

03/18/22 9:26 AM

Page 5

***Check Summary Register©**

Checks 01/18/22-03/21/22

Name	Check Date	Check Amt	
59054	MINN DEPARTMENT OF HEALTH	3/1/2022	\$1,793.00
59055	MINN POLLUTION CONTROL AG	3/1/2022	\$23.00 Clayton Prestidge
59056	MN VALLEY TESTING LAB	3/1/2022	\$25.00
59057	MRWA	3/1/2022	\$900.00 Tom Goepfert
59058	MUMFORD SANITATION	3/1/2022	\$22,642.75 COMPOST LEASE - January 2022
59059	536600-NCPERS GROUP LIFE IN	3/1/2022	\$32.00
59060	OFFICE DEPOT	3/1/2022	\$24.99
59061	CLAYTON PRESTIDGE	3/1/2022	\$65.00 CELL PHONE - March
59062	SPRINT	3/1/2022	\$307.80
59063	STREICHER'S	3/1/2022	\$19.98
59064	THEISEN, MEAGAN	3/1/2022	\$215.00 CELL - March
59065	T-MOBILE	3/1/2022	\$968.37
59066	ULINE	3/1/2022	\$377.54
59067	VERIZON	3/1/2022	\$80.02
59068	VERIZON CONNECT NWF, INC	3/1/2022	\$97.14
59069	VISA	3/1/2022	\$5,702.37
59070	WASTEWATER COMMISSION	3/1/2022	\$78,344.82 SAC FEES - Forsmans September 2021
59071	WRIGHT HENNEPIN ELECTRIC	3/1/2022	\$976.00
59072	COKATO MOTOR SALES, INC	3/1/2022	\$77.65 Invoice# 12774
59073	COKATO PARTS CITY	3/1/2022	\$34.57 Invoice# 65-728460
59075	ALEX AIR APPARATUS, INC	3/10/2022	\$891.33
59076	CENTERPOINT ENERGY	3/10/2022	\$410.88
59077	CENTRAL MN FIREFIGHTERS RE	3/10/2022	\$100.00
59078	CINTAS	3/10/2022	\$907.67
59079	COKATO MOTOR SALES, INC	3/10/2022	\$73.85
59080	COKATO TRANSPORTATION, IN	3/10/2022	\$230.00
59081	COURI, & RUPPE, P.L.L.P.	3/10/2022	\$1,869.40
59082	ELECTRONIC & APPLIANCE REC	3/10/2022	\$50.00
59083	FINKEN WATER CENTERS	3/10/2022	\$5.00
59084	FURTHER	3/10/2022	\$2.40
59085	GOPHER STATE ONE-CALL, INC	3/10/2022	\$8.10
59086	HAWKINS, INC	3/10/2022	\$2,196.32
59087	HEIMAN FIRE EQUIPMENT, INC	3/10/2022	\$582.30
59088	HERNANDEZ, YESENIA	3/10/2022	\$350.00 SSEC CANCELLATION 10-16-2022
59089	HL PIT STOP	3/10/2022	\$631.10
59090	HOWARD LAKE FOODS	3/10/2022	\$159.68
59091	HOWARD LAKE TIRE & AUTO	3/10/2022	\$644.66
59092	JOE'S SPORT SHOP	3/10/2022	\$1,245.70
59093	LEAGUE OF MN CITIES INS TRU	3/10/2022	\$66,140.00 Acct# 40006371
59094	CRAIG LOEBERTMANN	3/10/2022	\$119.39 Reimbursement
59095	MARCO TECHNOLOGIES LLC	3/10/2022	\$452.88
59096	METRO WEST INSPECTION SER	3/10/2022	\$3,328.68
59097	MIDWEST MACHINERY CO	3/10/2022	\$417.03
59098	MINKKINEN IRON, LLC	3/10/2022	\$3,750.00
59099	MN PEIP	3/10/2022	\$15,184.38
59100	MN STATE FIRE CHIEF ASSN	3/10/2022	\$100.00
59101	NAPA AUTO PARTS COKATO	3/10/2022	\$142.93
59102	NORTHWEST ASSOC CONSULT	3/10/2022	\$1,593.75
59103	PLUNKETT'S PEST CONTROL	3/10/2022	\$111.28
59104	PRIME ADVERTISING & DESIGN	3/10/2022	\$2,196.00
59105	JASON SWANSON	3/10/2022	\$1,000.00
59106	TK ELEVATOR	3/10/2022	\$504.00
59107	WASTEWATER COMMISSION	3/10/2022	\$41,750.73 January 2022 - Less Forsmans Portion
59108	STATE OF MINNESOTA	3/10/2022	\$937.50 Forfeitures of Property
59109	WRIGHT COUNTY ATTORNEY'S	3/10/2022	\$1,875.00 Administrative Forfeiture

CITY OF HOWARD LAKE

03/18/22 9:26 AM

Page 6

***Check Summary Register©**

Checks 01/18/22-03/21/22

	Name	Check Date	Check Amt	
59110	AJ MAGES, LLC	3/17/2022	\$200.00	
59111	ARCTIC GLACIER ICE, INC	3/17/2022	\$231.71	
59112	BREAKTHRU BEVERAGE	3/17/2022	\$5,202.67	CREDIT MEMO
59113	C & L DISTRIBUTING	3/17/2022	\$630.75	Beer
59114	CAPITOL BEVERAGE SALES	3/17/2022	\$6,730.09	CREDIT
59115	DAHLHEIMER BEVERAGE, LLC	3/17/2022	\$2,135.90	CREDIT
59116	FIRST SYSTEMS TECHNOLOGY,	3/17/2022	\$950.00	
59117	H&L MESABI	3/17/2022	\$3,633.00	
59118	HALVORSON LEGAL	3/17/2022	\$0.00	
59119	HOWARD LAKE FIRE DEPARTM	3/17/2022	\$351.25	FD DONATIONS - HLWS
59120	HOWARD LAKE FIRE RELIEF AS	3/17/2022	\$27,924.86	SUPP FIRE STATE AID
59121	JOE'S SPORT SHOP	3/17/2022	\$1,136.78	
59122	JOHNSON BROTHERS LIQUOR C	3/17/2022	\$12,886.85	Credit
59123	LEAGUE OF MN CITIES-W/C	3/17/2022	\$48,315.00	Acct# 40006347
59124	LOCHER BROS, INC	3/17/2022	\$2,707.10	CREDIT
59125	MEDIACOM LLC	3/17/2022	\$266.17	
59126	MIDWEST MACHINERY CO	3/17/2022	\$69.98	
59127	MN VALLEY TESTING LAB	3/17/2022	\$49.00	
59128	OFFICE DEPOT	3/17/2022	\$39.88	
59129	PAUMEN COMPUTER SERVICES	3/17/2022	\$946.39	
59130	PAUSTIS WINE COMPANY	3/17/2022	\$72.25	CREDIT
59131	PHILLIPS WINE & SPIRITS	3/17/2022	\$7,670.14	
59132	PLUNKETT'S PEST CONTROL	3/17/2022	\$30.10	
59133	SJF MATERIAL HANDLING, INC	3/17/2022	\$7,489.10	
59134	SOUTHERN GLAZER WINE & SPI	3/17/2022	\$1,671.80	
59135	VERIZON CONNECT NWF, INC	3/17/2022	\$97.14	
59136	VIKING BEVERAGES.	3/17/2022	\$296.00	
59137	VINOCOPIA, INC	3/17/2022	\$328.42	
59138	WASTEWATER COMMISSION	3/17/2022	\$43,949.90	SAC FEES - 229 Teming Way
59139	WINE MERCHANTS	3/17/2022	\$105.75	
59140	WRIGHT HENNEPIN ELECTRIC	3/17/2022	\$975.00	
59141	XCEL ENERGY	3/17/2022	\$7,331.25	
59142	ZIEGLER INC	3/17/2022	\$8,596.35	
59143	HALVORSON LEGAL	3/17/2022	\$3,303.20	Invoice 5810
501868e	HAGGENMILLER, NICHOLAS A	1/28/2022	\$3,131.74	
501869e	MERGES, JARED M	1/28/2022	\$2,138.88	
501870e	THEISEN, MEAGAN	1/28/2022	\$1,858.42	
501871e	ZANDER, SHARI	1/28/2022	\$908.71	
501872e	OTTENSTROER, JAMES D	1/28/2022	\$2,215.47	
501873e	PRESTIDGE, CLAYTON P	1/28/2022	\$1,374.30	
501874e	STANLEY, BRIDGET	1/28/2022	\$1,112.80	
501875e	LAWAY, MYRA	1/28/2022	\$1,868.80	
501876e	LINDER, EMILY	1/28/2022	\$124.04	
501877e	MCALPINE, DEBRA-ANN	1/28/2022	\$1,149.00	
501878e	OLSON, TINA M	1/28/2022	\$326.88	
501879e	REMER, TANYA M	1/28/2022	\$124.04	
501880e	HAGLIN, SERENA P	1/28/2022	\$161.20	
501881e	JOHNSON, JACOB D	1/28/2022	\$1,691.46	
501882e	SZCZEPANIK, DARIUSZ J	1/28/2022	\$1,869.07	
501883e	THOMPSON, DAVID G	1/28/2022	\$2,126.10	
501884e	THOMPSON, KYLE	1/28/2022	\$489.91	
501885e	WILLIAMS, HUNTER L	1/28/2022	\$806.67	
501886e	HAGGENMILLER, NICHOLAS A	2/11/2022	\$3,131.74	
501887e	MERGES, JARED M	2/11/2022	\$1,697.50	
501888e	THEISEN, MEAGAN	2/11/2022	\$1,858.42	

CITY OF HOWARD LAKE

03/18/22 9:26 AM

Page 7

***Check Summary Register©**

Checks 01/18/22-03/21/22

	Name	Check Date	Check Amt
501889e	ZANDER, SHARI	2/11/2022	\$101.71
501890e	OTTENSTROER, JAMES D	2/11/2022	\$1,679.48
501891e	PRESTIDGE, CLAYTON P	2/11/2022	\$1,469.89
501892e	STANLEY, BRIDGET	2/11/2022	\$1,112.80
501893e	BERG, TIMOTHY W	2/11/2022	\$161.61
501894e	BOBROWSKE, KEITH	2/11/2022	\$230.87
501895e	BRAVINDER, SETH Z	2/11/2022	\$69.26
501896e	DALBEC, JOSHUA S	2/11/2022	\$486.21
501897e	KITTOCK, BRIAN	2/11/2022	\$178.96
501898e	KITTOCK, NICOLE D	2/11/2022	\$267.05
501899e	LOEBERTMANN, AMANDA G	2/11/2022	\$230.87
501900e	PETERSON, DAVID T	2/11/2022	\$277.05
501901e	STUEVEN, MARK J	2/11/2022	\$346.31
501902e	YOKIEL, ANDREW J	2/11/2022	\$409.96
501903e	LAWAY, MYRA	2/11/2022	\$1,808.11
501904e	LINDER, EMILY	2/11/2022	\$266.88
501905e	MCALPINE, DEBRA-ANN	2/11/2022	\$1,109.30
501906e	MCALPINE, LEXI	2/11/2022	\$15.88
501907e	OLSON, TINA M	2/11/2022	\$269.53
501908e	REMER, TANYA M	2/11/2022	\$168.33
501909e	ZINCHINI, TIFFANI M	2/11/2022	\$3.62
501910e	HAGLIN, SERENA P	2/11/2022	\$218.89
501911e	JOHNSON, JACOB D	2/11/2022	\$1,691.46
501912e	PREUSSE, MITCHELL D	2/11/2022	\$422.39
501913e	STENDER, KOREY D	2/11/2022	\$149.44
501914e	SZCZEPANIK, DARIUSZ J	2/11/2022	\$1,869.07
501915e	THOMPSON, DAVID G	2/11/2022	\$2,126.10
501916e	THOMPSON, KYLE	2/11/2022	\$358.23
501917e	WILLIAMS, HUNTER L	2/11/2022	\$585.02
501918e	HAGGENMILLER, NICHOLAS A	2/25/2022	\$3,503.13
501919e	MERGES, JARED M	2/25/2022	\$1,891.88
501920e	THEISEN, MEAGAN	2/25/2022	\$1,858.42
501921e	ZANDER, SHARI	2/25/2022	\$572.45
501922e	OTTENSTROER, JAMES D	2/25/2022	\$1,601.59
501923e	PRESTIDGE, CLAYTON P	2/25/2022	\$1,469.89
501924e	STANLEY, BRIDGET	2/25/2022	\$1,112.80
501925e	GILYARD, JODI	2/25/2022	\$44.97
501926e	LAWAY, MYRA	2/25/2022	\$1,808.11
501927e	LINDER, EMILY	2/25/2022	\$124.04
501928e	MCALPINE, DEBRA-ANN	2/25/2022	\$958.50
501929e	MCALPINE, LEXI	2/25/2022	\$142.91
501930e	OLSON, TINA M	2/25/2022	\$141.76
501931e	REMER, TANYA M	2/25/2022	\$236.26
501932e	ZINCHINI, TIFFANI M	2/25/2022	\$39.06
501933e	HAGLIN, SERENA P	2/25/2022	\$257.79
501934e	JOHNSON, JACOB D	2/25/2022	\$1,691.46
501935e	PREUSSE, MITCHELL D	2/25/2022	\$616.77
501936e	STENDER, KOREY D	2/25/2022	\$753.73
501937e	SZCZEPANIK, DARIUSZ J	2/25/2022	\$1,869.07
501938e	THOMPSON, DAVID G	2/25/2022	\$2,126.10
501939e	THOMPSON, KYLE	2/25/2022	\$328.72
501940e	WILLIAMS, HUNTER L	2/25/2022	\$389.89
501941e	GILBERT, EMMAGENE	3/11/2022	\$1,124.74
501942e	HAGGENMILLER, NICHOLAS A	3/11/2022	\$3,224.59
501943e	MERGES, JARED M	3/11/2022	\$1,916.58

CITY OF HOWARD LAKE

03/18/22 9:26 AM

Page 8

***Check Summary Register©**

Checks 01/18/22-03/21/22

	Name	Check Date	Check Amt
501944e	MEYER, CHRISTIAN A	3/11/2022	\$167.22
501945e	MUNSON, ALLAN W.	3/11/2022	\$1,124.74
501946e	THEISEN, MEAGAN	3/11/2022	\$1,858.42
501947e	ZANDER, SHARI	3/11/2022	\$1,042.76
501948e	OTTENSTROER, JAMES D	3/11/2022	\$1,834.33
501949e	PRESTIDGE, CLAYTON P	3/11/2022	\$1,374.30
501950e	STANLEY, BRIDGET	3/11/2022	\$1,112.80
501951e	BERG, TIMOTHY W	3/11/2022	\$138.52
501952e	BOBROWSKE, KEITH	3/11/2022	\$115.44
501953e	BRAVINDER, SETH Z	3/11/2022	\$69.26
501954e	DALBEC, JOSHUA S	3/11/2022	\$275.21
501955e	KITTOCK, BRIAN	3/11/2022	\$92.35
501956e	KITTOCK, NICOLE D	3/11/2022	\$174.70
501957e	LOEBERTMANN, AMANDA G	3/11/2022	\$115.44
501958e	PETERSON, DAVID T	3/11/2022	\$323.22
501959e	YOKIEL, ANDREW J	3/11/2022	\$275.21
501960e	LAWAY, MYRA	3/11/2022	\$1,865.91
501961e	LINDER, EMILY	3/11/2022	\$194.57
501962e	MCALPINE, DEBRA-ANN	3/11/2022	\$882.31
501963e	MCALPINE, LEXI	3/11/2022	\$25.41
501964e	MENARD, ROBIN L	3/11/2022	\$128.81
501965e	OLSON, TINA M	3/11/2022	\$271.70
501966e	REMER, TANYA M	3/11/2022	\$200.83
501967e	HAGLIN, SERENA P	3/11/2022	\$244.83
501968e	JOHNSON, JACOB D	3/11/2022	\$1,691.46
501969e	PREUSSE, MITCHELL D	3/11/2022	\$443.51
501970e	SZCZEPANIK, DARIUSZ J	3/11/2022	\$2,036.92
501971e	THOMPSON, DAVID G	3/11/2022	\$2,126.10
501972e	THOMPSON, KYLE	3/11/2022	\$619.87
501973e	WILLIAMS, HUNTER L	3/11/2022	\$703.63
Total Checks			\$1,108,035.59

CITY OF HOWARD LAKE

03/18/22 9:25 AM

Page 1

***Check Summary Register©**

Checks 01/18/22-03/21/22

	Name	Check Date	Check Amt	
1012	CAB - AMBULANCE			
5819	ALLINA HEALTH EMS	2/15/2022	\$200.00	
5820	CENTRAL MCGOWAN, INC	2/15/2022	\$26.63	
5821	CITY OF HOWARD LAKE	2/15/2022	\$4,925.00	WAGES
5822	GRAFIX SHOPPE	2/15/2022	\$580.00	
5823	JOE'S SPORT SHOP	2/15/2022	\$573.38	
5824	RIDGEVIEW MEDICAL CENTER	2/15/2022	\$800.00	
5825	JOE SHEROD	2/15/2022	\$90.16	REIMBURSEMENT
5826	VISA	2/15/2022	\$143.27	
5827	JOHNS COLLISION LLC	3/3/2022	\$4,643.87	
5828	VISA	3/3/2022	\$1.79	Finance Charge
5829	ALLINA HEALTH EMS	3/10/2022	\$400.00	
5830	BLUE CROSS AND BLUE SHIELD	3/10/2022	\$436.80	
5831	BOUNDTREE MEDICAL	3/10/2022	\$714.47	
5832	CENTRAL MCGOWAN, INC	3/10/2022	\$26.46	
5833	CITY OF HOWARD LAKE	3/10/2022	\$3,700.00	Wages
5834	EMERGENCY MEDICAL TRAININ	3/10/2022	\$450.00	
5835	HOWARD LAKE TIRE & AUTO	3/10/2022	\$511.34	
5836	JOE'S SPORT SHOP	3/10/2022	\$533.33	
5837	KEAVENY PHARMACY	3/10/2022	\$2,003.78	Account# 33875
5838	RIDGEVIEW MEDICAL CENTER	3/10/2022	\$600.00	
5840	HOWARD LAKE FIRE DEPARTM	3/17/2022	\$4,125.00	Ambulance Training Reimbursement - MMB
	Total Checks		\$25,465.24	



HOWARD LAKE CITY COUNCIL MEETING

MARCH 21, 2022

AGENDA ITEM: Consider Declaring Property Surplus and Direct Staff to Dispose of Property

SECTION: New Business

FROM: Nick Haggemiller, City Administrator
Keith Bobrowske, Fire Chief

BACKGROUND: The City recently took possession of a new rig. The HLFDD is now ready to dispose of the truck it previously used for these purposes. Therefore, the City would sell the 1994 rig on an approved fire department auction website.

Proceeds from the sale would be put back into the HLFDD's capital equipment fund.

DECISION MAKING METRICS:

FINANCIAL: The original price for the truck was \$130,000. The current estimated value is less than \$10,000.

LEGAL: The current truck is listed on our capital assets summary and related depreciation schedule. In order to legally dispose of the property, the council must authorize.

STRATEGIC PLAN: Open

COUNCIL ACTION REQUESTED: Declare fire truck to be 'excess property' and direct staff to sell the asset.

ATTACHMENTS: Open



**City of Howard Lake
02/01/2022**

	<u>2021</u>	<u>2022</u>
Property:	\$30,516	\$28,767
Mobile Property:	\$2,136	\$1872
Crime – Money & Securities	<i>Included</i>	<i>Included</i>
Municipal Liability and E&O:	\$21,764	\$23,998
Automobile:	\$6,286	\$6,373
Liquor Liability:	\$1,920	\$1,296
No Fault Sewer Back Up:	\$1,450	\$1,320
First Party Cyber:	N/A	\$1,941
Bond:	\$384	\$573
Subtotal:	\$64,456	\$66,140
Workers Compensation:	\$65,744	\$50,240
Policy Total:	\$130,200	\$116,380



February 11, 2022

Citizens Alliance Agency

Covered Party: City of Howard Lake

Effective Date: 2/1/2022

RENEWAL PREMIUM SUMMARY
Common Coverages

Coverage		Deductible	Premium
• Property	\$	2,500.	\$28,767.
• Mobile Property		2,500.	1,872.
• Municipal Liability		2,500.	23,998.
• Automobile Liability		2,500.	2,639.
• UM/UIM \$200,000 all owned autos		2,500.	Included.
• Basic Economic Loss Benefits (PIP) all owned autos		2,500.	Included.
• Automobile Physical Damage		2,500.	3,734.
• Crime		250.	Included.
• Petrofund		NA.	Included.
• Defense Cost Reimbursement		NA.	Included.

Auto Experience Mod:

0.95

Municipal Liability Experience Mod:

0.933

The modifiers are calculated with a formula which compares the city's actual loss history with the amount of losses that would be expected for a city of that size if the city were a perfectly average LMCIT member. If the city's losses and expenses are better than average the city receives a premium credit. If the city's losses and expenses are worse than average, the city receives a premium debit.

Optional Coverages

Coverage		Deductible	Premium
• Bond	\$ 500,000.	2,500.	573.
• Equipment Breakdown			Not Covered.
• Excess Liability Limit:	\$	NA.	Not Covered.
• Liquor Liability Limit:	\$ 1,000,000.	NA.	1,296.
• Fireworks			Not Covered.
• No Fault Sewer Back Up Limit:	\$ 10,000.	2,500.	1,320.
• Airport Liability			Not Covered.
• First Party Cyber	\$ 250,000	250.	1,941.
		TOTAL:	\$66,140.

DO NOT PAY UNTIL YOU RECEIVE INVOICES

TORT LIMIT: \$500,000/\$1,500,000

LEAGUE OF MINNESOTA CITIES
INSURANCE TRUST

145 UNIVERSITY AVE. WEST PHONE: (651) 281-1200 FAX: (651) 281-1298
ST. PAUL, MN 55103-2044 TOLL FREE: (800) 925-1122 WEB: WWW.LMC.ORG

Covenant Number:
CMC_1000511_Q-11

Previous Covenant Number:

COMMON COVERAGE DECLARATIONS
Coverage is Provided by:
THE LEAGUE OF MINNESOTA CITIES
INSURANCE TRUST
(Herein called LMCIT)



Item 1. **CITY and MAILING ADDRESS**

HOWARD LAKE, CITY OF

PO BOX 736
HOWARD LAKE, MN 55349-0736

Item 2. **COVERAGE PERIOD:**

From: 02/01/2022 To: 02/01/2023

**12:01 AM Standard Time at Mailing Address on
Common Coverage Declarations**

Item 3. **THE COVERED PARTY IS:** CITY

Item 4. **COVERAGE PARTS:**

**IN RETURN FOR THE PAYMENT OF THE PREMIUM, AND SUBJECT TO ALL THE TERMS OF
THIS COVENANT, LMCIT AGREES TO PROVIDE THE COVERED PARTY WITH COVERAGES
SHOWN BELOW FOR WHICH A PREMIUM CHARGE IS STATED:**

PROPERTY, CRIME, BOND, and PETROFUND

	Premium
Property	\$ 30,639
Additional Covered Loss or Damages	INCLUDED
Water and Supplemental Flood Coverage	INCLUDED
Crime	INCLUDED
Bond	\$ 573
Petrofund	INCLUDED
FIRST PARTY CYBER	\$ 1,941
EQUIPMENT BREAKDOWN	NOT COVERED
MUNICIPAL LIABILITY	\$ 25,318
Medical and Related Expense	INCLUDED
AUTOMOBILE LIABILITY	\$ 2,639
AUTOMOBILE PHYSICAL DAMAGE	\$ 3,734
TOTAL	\$ 64,844

Item 5. **GENERAL ANNUAL AGGREGATE DEDUCTIBLE:** DOES NOT APPLY

Item 6. **PREMIUM IS DUE AND PAYABLE:** 1-Pay (100% down, no Service Fees)

Item 7. **FORMS APPLICABLE TO ALL COVERAGE PARTS:**

CCM(11/16)

Item 8. **DECLARATIONS APPLICABLE:**

DEC-011(11/21) DEC-012(11/21) DEC-013(11/19) DEC-016(11/15)

(+) liquor

Quote

Optional Coverage Quotes

Coverage	Deductible	Approximate Premium
Excess w/Liquor	\$1,000,000	\$7,208.

Optional coverage(s) are not bound unless the covered party has requested that coverage be bound and LMCIT has sent a written confirmation. Optional coverage quotes are valid for 30 days after the date of this letter.

Sincerely,

Underwriter

League of Minnesota Cities Insurance Trust
Group Self-Insured Workers' Compensation Plan
145 University Avenue West St. Paul, MN 55103-2044 Phone (651) 215-4173

Notice of Premium Options for Standard Premiums of \$50,000 - \$100,000

HOWARD LAKE, CITY OF
PO BOX 736
HOWARD LAKE, MN 55349-0736

Agreement No.: WC 1001558_Q-6
Agreement Period:
From: 02/01/2022
To: 02/01/2023

Enclosed is a quotation for workers' compensation deposit premium. **Note: Renewal Coverage will be bound as per the expiring coverage arrangement, including coverage for elected and appointed officials, with the premium indicated on the quote, unless the member or agent sends a written request not to bind renewal coverage.**

<u>PAYROLL DESCRIPTION</u>	<u>CODE</u>	<u>RATE</u>	<u>ESTIMATED PAYROLL</u>	<u>DEPOSIT PREMIUM</u>
----------------------------	-------------	-------------	------------------------------	----------------------------

SEE ATTACHED SCHEDULE FOR DETAILS

Manual Premium		57,883
Experience Modification	0.95	-2,894
Standard Premium		54,989
(no ded) Deductible Credit	0.00%	0
Premium Discount		-4,749
Net Deposit Premium		\$50,240
Adjustment for Commission*		0
Total Net Deposit Premium		\$50,240

*Workers compensation rates assume a 2% standard commission. The commission adjustment accounts for the commission difference, above or below 2%.

Agent:
01546 Citizens Alliance Agency Inc
22 Center Ave W, PO Box 750
Clara City, MN 56222-0750

1.36 mod
wks (590 ded
before)

Last year
65,744

**Notice of Premium Options for Standard Premiums of \$50,000 - \$100,000
(Con't)**

CONTINUATION SCHEDULE FOR QUOTATION PAGE

<u>REMUNERATION</u>	<u>RATE</u>	<u>CODE</u>	<u>DESCRIPTION</u>	<u>EST. PREM</u>
120,000	9.37	5506	STREET CONSTRUCTION	11,244
78,000	3.95	7520	WATERWORKS	3,081
POP 3,866	265.55	7708	FIREFIGHTERS (VOLUNTEER)	10,266
237,000	10.76	7720	POLICE	25,501
120,000	4.11	8017	OFF SALE LIQUOR STORE	4,932
270,000	0.74	8810	CLERICAL OFFICE EMPLOYEES NOC	1,998
10,000	7.68	9102	PARKS	768
18,200	0.51	9411	ELECTED OR APPOINTED OFFICIALS	93
Manual Premium				57,883

Jon Kuhlmann

From: Brue, Nathan <nbrue@lmc.org>
Sent: Friday, February 11, 2022 2:20 PM
To: Jon Kuhlmann
Subject: Howard Lake - Renewal Quote
Attachments: Summary.pdf; Breakdown.xlsx

WARNING: This email is from an external source. Do not click links or attachments unless you recognize the sender and know the content is safe.

Good afternoon,

Attached is the renewal quote.

Overall premium is up 2.61% from expiring as outlined below.

Coverage	Premium		% Change
	2022	2021	
Property	\$ 28,767	\$ 30,516	-5.73%
Mobile Property	\$ 1,872	\$ 2,136	-12.36%
Municipal Liability	\$ 23,998	\$ 21,764	10.26%
Auto Liability	\$ 2,639	\$ 2,585	2.09%
Auto Physical Damage	\$ 3,734	\$ 3,701	0.89%
Bond	\$ 573	\$ 384	49.22%
Liquor Liability	\$ 1,296	\$ 1,920	-32.50%
First Party Cyber	\$ 1,941	\$ -	#DIV/O!
No Fault Sewer	\$ 1,320	\$ 1,450	-8.97%
Total Premium	\$ 66,140	\$ 64,456	2.61%

A few comments on the above:

- Property premium is down 5.73% due to the following:
 - Rate changes (see below memo)
 - First Party Cyber now on standalone coverage – previously coverage/premium was baked into the property coverage/premium (see below memo)
 - Annual inflation (slightly offset the rate decreases)

LEAGUE OF MINNESOTA CITIES INSURANCE TRUST

145 UNIVERSITY AVENUE WEST
ST. PAUL, MN 55103-2044
(651) 281-1200

AGREEMENT NUMBER CMC1000511-7
EFFECTIVE DATE 2-1-2022 EXPIRATION DATE 2-1-2023

YEAR _____ MAKE/MODEL _____

VEHICLE IDENTIFICATION NUMBER: _____

All Vehicles

Fleet Coverage

COVERED ENTITY: City of Howard Lake

PLEASE KEEP THIS CARD IN YOUR VEHICLE

LEAGUE OF MINNESOTA CITIES INSURANCE TRUST

145 UNIVERSITY AVENUE WEST
ST. PAUL, MN 55103-2044
(651) 281-1200

AGREEMENT NUMBER CMC1000511-7
EFFECTIVE DATE 2-1-2022 EXPIRATION DATE 2-1-2023

YEAR _____ MAKE/MODEL _____

VEHICLE IDENTIFICATION NUMBER: _____

All Vehicles

Fleet Coverage

COVERED ENTITY: City of Howard Lake

PLEASE KEEP THIS CARD IN YOUR VEHICLE

LEAGUE OF MINNESOTA CITIES INSURANCE TRUST

145 UNIVERSITY AVENUE WEST
ST. PAUL, MN 55103-2044
(651) 281-1200

AGREEMENT NUMBER CMC1000511-7
EFFECTIVE DATE 2-1-2022 EXPIRATION DATE 2-1-2023

YEAR _____ MAKE/MODEL _____

VEHICLE IDENTIFICATION NUMBER: _____

All Vehicles

Fleet Coverage

COVERED ENTITY: City of Howard Lake

PLEASE KEEP THIS CARD IN YOUR VEHICLE

LEAGUE OF MINNESOTA CITIES INSURANCE TRUST

145 UNIVERSITY AVENUE WEST
ST. PAUL, MN 55103-2044
(651) 281-1200

AGREEMENT NUMBER CMC1000511-7
EFFECTIVE DATE 2-1-2022 EXPIRATION DATE 2-1-2023

YEAR _____ MAKE/MODEL _____

VEHICLE IDENTIFICATION NUMBER: _____

All Vehicles

Fleet Coverage

COVERED ENTITY: City of Howard Lake

PLEASE KEEP THIS CARD IN YOUR VEHICLE



HOWARD LAKE CITY COUNCIL

March 21, 2022

AGENDA ITEM: Consider Resolution Approving EDA Redevelopment Project Area.

SECTION: New Business

FROM: Nick Haggenmiller, City Administrator

BACKGROUND: The City has been working towards the construction of a new library facility that is proposed to be located at Central Park at the corner of 8th Avenue and 9th Street.

General Project/Financing Background

At the recommendation of the city's financial advisor, the proposed financing mechanism will be to have the Economic Development Authority (EDA) act as the building/property owner and lease the facility to the City for the purpose of providing library services. Additionally, the City is seeking to use United States Department of Agriculture (USDA) Community Facilities Program as loan underwriter. The USDA program enables the City to obtain very competitive borrowing rates of about 2% but at a 40-year term, rather than a traditional 10 or 20 year bond. Extending the term in this manner makes the annual bond payments much more reasonable and will have a less dramatic hit to your levy and tax rate.

EDA Redevelopment Project Area

In order for the EDA to move forward with financing, a "redevelopment project area" must be approved by various city entities including:

Parks & Planning Commission

Determines that a redevelopment project area is consistent with the comprehensive plan.

- ➔ At the 3.9.22 PPC Meeting, the commission voted in favor of the redevelopment area and deemed it consistent with the comprehensive plan.

City Council

Holds a public hearing on the redevelopment plan and project area and adopts via resolution.

- ➔ Public hearing notifications have been published in the Herald Journal. The March 21, 2022 Meeting will include the public hearing for this purpose.

Economic Development Authority

The EDA will be the responsible entity relating to the redevelopment plan and project.

- ➔ It is anticipated that the council will approve their resolution at the March 21, 2022 meeting and immediately following the council meeting, the EDA will approve the final resolution to establish the redevelopment plan.

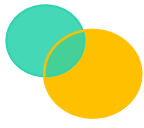
Redevelopment Plan & Project Area

The proposed redevelopment plan specifically calls out the Central Park site and surrounding area for the project area. The larger project area shown does not alter any city zoning, land use or otherwise decisions. However, the redevelopment plan itself would have to be updated with each new project brought forward including the specific site and budget.

COUNCIL ACTION REQUESTED: Approve Resolution Approving EDA Redevelopment Project Area

ATTACHMENTS:

1. Memo from City Financial Advisor, Shannon Sweeney
2. EDA Redevelopment Plan
3. Resolution



DDA

David Drown Associates, Inc.
Public Finance Advisors

Cologne Office:
10555 Orchard Road
Cologne, MN 55322
(952) 356-2992
shannon@daviddrown.com

March 16, 2022

City of Howard Lake
Nick Haggenmiller, City Administrator
PO Box 736
Howard Lake, MN 55349-0736

RE: Redevelopment Project Area & Plan
Howard Lake City Council & Economic Development Authority

Honorable Mayor, Council Members, Commissioners, and Administrator Haggenmiller:

The City of Howard Lake has been working its way through the funding process to construct a new library on the former school site. It is intended for the Economic Development Authority of the City to be the borrower from USDA-Rural Development (Federal Government) for the project to access better loan terms.

As a part of the process for serving as issuer, the Economic Development Authority must adopt a Redevelopment Plan that establishes goals for a redevelopment area within the City. The attached draft plan establishes a project area and goals for redevelopment. Attached for consideration following the public hearing are resolutions to be considered by the City Council and Economic Development Authority providing for the adoption of the redevelopment project area and plan.

Thank you for your time and consideration of this material. Please feel free to contact me if you would like to discuss this information in additional detail.

Sincerely,

Shannon Sweeney, Associate
David Drown Associates, Inc.

REDEVELOPMENT PLAN

FOR

LIBRARY PROJECT

DATED: MARCH 21, 2022

CITY OF HOWARD LAKE ECONOMIC DEVELOPMENT AUTHORITY

TABLE OF CONTENTS

	Page
I. INTRODUCTION AND LEGAL BASIS	1
A. Intent	1
B. Statement.....	1
C. Redevelopment Area Boundaries	1
D. Statement of Authority.....	1
E. Findings and Declaration	2
II. REDEVELOPMENT PROGRAM	2
A. Redevelopment Plan Objectives	2
B. Land Use	3
C. Redevelopment Activities	3
D. Financing Plan	3
E. Development Standards	4
F. Environment Controls.....	4
G. Administration of Project.....	4
H. Modification of Plan	4

Exhibit A - Redevelopment Area Boundary Map

Exhibit B - Budget

I. INTRODUCTION AND LEGAL BASIS

A. Intent

The City of Howard Lake Economic Development Authority, Howard Lake, Minnesota (the “EDA”) proposes to establish a Redevelopment Project Area as described herein (the "Redevelopment Project Area"), in connection with the development of a new library in the City.

In the remainder of the Redevelopment Area the EDA proposes to facilitate, as appropriate, private development by acquiring land and preparing it for private development and by constructing public infrastructure improvements.

B. Statement

The City and EDA have determined that conditions exist within the Redevelopment Area which have prevented further development of land by private enterprise. It has been found that the Redevelopment Area is potentially more useful and valuable for contributing to the public health, safety and welfare than has been realized under existing development.

The development of these parcels are not attainable in the foreseeable future without the intervention of the EDA in the private development process. The EDA has prepared the Redevelopment Plan, which provides for the elimination of these conditions, thereby making the land useful and valuable for contributing to the public health, safety and welfare.

C. Redevelopment Area Boundaries

The boundaries of the Redevelopment Area are outlined on the Redevelopment Area Boundary Map, Exhibit A.

All land included in the Project Area is within the legal boundaries of the City.

D. Statement of Authority

Minnesota Statutes Section 469.001-469.047 (Housing and Redevelopment Authority Act) grants municipalities the authority to designate redevelopment areas within the boundaries of the municipalities. Within these areas, the municipality may adopt a redevelopment plan and establish a project consistent with the municipality's public purpose. The project as contemplated by this

plan consists of a redevelopment project as defined in Section 469.001, Subdivision 14.

E. Findings and Declaration

The City and the EDA make the following findings:

1. The certain parcels of land in the project area would not be made available for redevelopment without some public financial aid.
2. The redevelopment plans for the Redevelopment Area in the City will afford maximum opportunity consistent with the needs of the locality as a whole, for the redevelopment of the area by private enterprise.
3. The Redevelopment Plan conforms to the general plan for development of the locality as a whole.

II. REDEVELOPMENT PROGRAM

A. Redevelopment Plan Objectives

The EDA, through implementation of this plan, seeks to achieve the following objectives:

1. To promote and seek the orderly and harmonious development of the Redevelopment Area.
2. To provide logical and organized land use for the entire Redevelopment Area consistent with the Comprehensive Land Use Plan and the Zoning Ordinance of the City.
3. To promote the prompt development of property in the Redevelopment Area with a minimal adverse impact on the environment.
4. To provide general design guidance in conjunction with a suitable development contract in order to enhance the physical environment of the area.
5. To provide adequate utilities and other public improvements and facilities, to enhance the Redevelopment Area and the City for new and existing development.
6. To assist the financial feasibility of private projects to the extent necessary and where there is a corresponding level of public benefit.
7. To enhance the overall economy of the City and surrounding area by retaining current, and providing additional employment opportunities for the residents of the City and surrounding community.

8. To increase the City's tax base.
9. To stimulate development and investment within the Redevelopment Area by private interests.

B. Land Use

The proposed land use for the Redevelopment Area is public facilities including park area and library and private residential development.

C. Redevelopment Activities

1. Acquisition

The EDA proposes to acquire the property in the Redevelopment Area on which the library will be located. Other than that property, other property in the Redevelopment Area may be acquired by the EDA if and when required to facilitate development or redevelopment within the Redevelopment Area by private enterprise.

2. Relocation

It is not expected that any persons will be displaced as a result of this Redevelopment Plan.

3. Library and Other Public Improvements.

The EDA proposes to cause the library to be constructed and, as appropriate, other public improvements within the Redevelopment Area.

D. Financing Plan

1. Project Budget

Attached hereto as Exhibit B is a budget which details estimated development costs associated with constructing and equipping the Library as currently contemplated. The items of cost and the costs thereof shown in the budget are estimated to be necessary based upon information now available. It is anticipated that the items of cost and the costs thereof shown in each category in the budget may decrease or increase, but that the total project cost will not exceed the amount shown above.

2. Source of Funds and Public Assistance

The EDA is seeking a USDA-Rural Development Community Facilities Loan of approximately \$3,581,529 to fund that portion of the project cost not covered by a State Grant. It is anticipated that the total project cost will be approximately \$4,248,174.

3. Bond Issue Details

The EDA proposes to issue revenue bonds in an amount not to exceed \$3,581,529 to finance a portion of the cost of construction.

E. Development Standards

The EDA will consider among other things, the following factors when evaluating development proposals for projects within the Redevelopment Area seeking public assistance and support:

1. Degree to which redevelopment objectives are provided for or enhanced.
2. Consistency with this plan and the City's Comprehensive Plan.

F. Environmental Controls

It is presently anticipated that the proposed development in the Redevelopment Area will not present major environmental problems. All municipal actions and public improvements will be carried out in a manner that will comply with applicable environmental standards. The environmental controls to be applied within the area are contained within the codes and ordinances of the City.

G. Administration of Project

The City Council has authorized the EDA to be responsible for seeing that the contents of this Plan are promoted, implemented and enforced.

H. Modification of Plan

A Redevelopment Plan may be modified at any time. The modification must be adopted by the EDA and the City, upon notice and after the public hearing required for the original adoption of the Redevelopment Plan.

Changes that do not alter or affect the exterior boundaries and do not substantially alter or affect the general land use established in

the plan, shall not constitute a modification of the Redevelopment Plan, nor require approval by the City.

EXHIBIT A

Description of the Redevelopment Area and Boundary Map



Date created: 2/24/2022
Last Data Uploaded: 2/24/2022 10:37:53 AM

Developed by Schneider
GEOSPATIAL

EXHIBIT B - Budget



Howard Lake Library - Feasibility Study

New Construction: Central Park

BKV Project No. 2193.01.02

June 1, 2021

Item	BKV PD Est	PPM SD Est	Work included/ Notes
SITEWORK			
Site Demolition	\$36,000		Site clearing for new work, incl. new foundations
New Site Work (Hard and Softscape)	\$40,000		Includes soil, plantings, pavers. Parking itemized under shared costs.
Utilities	\$9,750		
Subtotal:	\$85,750	\$168,398	

DEMOLITION			
See site development above	\$0		
Subtotal:	\$0		

ARCHITECTURAL			
New Construction	\$1,871,135	\$2,097,528	
New Construction: Library & Cmty Rm	\$1,741,635		
New Construction: Park Restrooms	\$129,500		Fixtures count towards library req'ts; separate ext entry
Construction Cost Uplift for ZNE	\$135,000	\$128,376	
Subtotal:	\$2,006,135	\$2,225,904	

Construction Subtotal: **\$2,091,885** **\$2,394,302**

Design Contingency (15%) \$313,783 \$287,316

General Conditions / General Requirements (15%) \$313,783 \$383,088

Construction Contingency (10%) \$209,189 \$239,430

Subtotal Construction Cost: **\$2,928,639** **\$3,304,136**

Delta \$375,497

SOFT COSTS			
Design & Engineering Fees	\$249,202		
Architecture & Engineering	\$132,702		
FF&E	\$7,000		
Envelope	\$8,000		
Commissioning	\$8,000		Includes services from design through CA and post-occupancy
Geotechnical Testing	\$2,500		
Remaining for Other Consultants TBD	\$60,000		
ZNE Energy Modeling and Specs	\$31,000		Precipitate excl B3/SB2030 Lead
Moving	\$4,500		
Furniture	\$155,758		Based on predesign plan/quantities
Equipment	\$41,540		
AV/IT - New Work	\$53,471		
Artwork	\$20,000		Allowance for integrated public artwork (murals etc)
Exterior Signage	\$20,000		Type to be defined: building mounted vs. monument
Permitting	\$7,800		
Owner's Contingency	\$104,594		New allowance at DD 5%
	\$656,865	\$656,865	

Estimated Total Project Cost: **\$3,585,504** **\$3,961,002**

Escalation to Midpoint of Construction \$286,840 \$287,173 Projected to 2022 at 4% per year

Escalated Library Subtotal Project Cost: **\$3,872,344** **\$4,248,174** PD Report listed as 3,717,480

Delta \$375,830

CITY OF HOWARD LAKE
WRIGHT COUNTY
STATE OF MINNESOTA

HELD: MARCH 21, 2022

RESOLUTION NO. 22-07

Member _____ introduced the following resolution and moved its adoption:

RESOLUTION APPROVING REDEVELOPMENT PROJECT AREA AND PLAN

BE IT RESOLVED by the City Council (the "Council") of the City of Howard Lake, Minnesota (the "City"), as follows:

Section 1. Recitals.

(a) It has been proposed by the City of Howard Lake Economic Development Authority (the "EDA"), that the EDA establish a Redevelopment Project Area as described herein (the "Redevelopment Project Area"), in connection with construction of a library in connection with the redevelopment of a former school site located at 825 8th Avenue, in the City and adopting the Redevelopment Plan for the Redevelopment Project Area (the "Plan"); all pursuant to and in conformity with applicable law, including Minnesota Statutes, Sections 469.001 through 469.047; all as reflected in that certain document entitled in part "Redevelopment Plan for Library Project" dated March 21, 2022, and presented for the Council's consideration.

(b) The Council has investigated the facts relating to the Plan.

(c) The City has performed all actions required by law to be performed prior to the adoption and approval of the Plan, including, but not limited to, a review of and written comment on the Plan by the City's Planning & Zoning Commission, and the holding of a public hearing thereon following at least 10 but not more than 30 days' prior published notice thereof, as required by law.

Section 2. Findings for the Adoption and Approval of the Plan.

(a) The Council hereby finds that the Plan conforms to the general plan for the development or redevelopment of the City as a whole because the Redevelopment Project Area is properly zoned for the intended uses, and the anticipated development is in furtherance of long range plans of the City for that area; that the Plan will afford maximum opportunity consistent with the sound needs of the City as a whole, for the development of the Redevelopment Project Area and adjacent areas by private enterprise because they will enable the EDA to provide and finance necessary public facilities; and the land in the Redevelopment Project Area would not be made available for redevelopment without the financial aid to be sought.

(b) The Council further finds that the Plan is intended and, in the judgment of this Council, its effect will be, to promote the public purposes and accomplish the objectives specified in the Redevelopment Plan for Redevelopment Project Area.

Section 3. Approval and Adoption of the Plan. The Plan, as presented to the Council on this date, including without limitation the findings and statements of objectives contained therein, are hereby approved, ratified, established, and adopted and shall be placed on file in the office of the City Administrator.

Adopted by the City Council on March 21, 2022.

Mayor

City Administrator

The motion for the adoption of the foregoing resolution was duly seconded by Member _____, and upon vote being taken thereon, the following voted in favor thereof:

and the following voted against the same:

Whereupon the resolution was declared passed and adopted.

STATE OF MINNESOTA
COUNTY OF WRIGHT
CITY OF HOWARD LAKE

I, the undersigned, being the duly qualified and acting City Administrator of the City of Howard Lake, Minnesota, DO HEREBY CERTIFY that I have compared the attached and foregoing extract of minutes with the original thereof on file in my office, and that the same is a full, true and complete transcript of the minutes of a meeting of the City Council, duly called and held on the date therein indicated, insofar as such minutes relate to the Approval of the City of Howard Lake Economic Development Authority, Minnesota's Redevelopment Project Area and Plan.

Dated: March 21, 2022.

City Administrator



HOWARD LAKE CITY COUNCIL MEETING

MARCH 21, 2022

AGENDA ITEM: PRESENTATION: Water Resource Study

SECTION: New Business

FROM: Nick Haggemiller, City Administrator
Jennifer Selchow P.E., Bolton and Menk Inc.

BACKGROUND: The city council authorized a water resource study to be completed by the city engineering firm in August of 2021. The purpose of the study is to evaluate the current system including wells, storage and treatment. The study would further look at projected demands relating to water and establish a preliminary scope for future capital needs.

The draft study is complete and will be reviewed at the council meeting. The study proposes:

- A new well.
- A new water tower and de-commissioning of existing tower.
- A new water treatment plant and de-commissioning of existing WTP.

As discussed with council at the onset of the study, this general scope and understanding has been long known. While impacted by residential and industrial growth, the single biggest need is a water treatment plant. The existing water treatment plant is at the end of its useful life.

The primary purpose of this presentation is to understand the current state of our water system. The city council is asked to consider the general recommendations and to provide feedback to consultants and staff related to the type of water treatment facility to be designed and anticipated delivery schedule. With this feedback, staff and consultants will continue towards the full design and project management associated with a substantial street & utility project slated for 2023/24.

The timing of this approval is intentional. First, based on the feedback provided by the mayor/council, a site plan will be established to determine the best location for a new WTP, well and water tower. At the onset of this project, a goal of a centralized public works and utilities campus was noted. Doing so would be efficient for staffing purposes as well as to potentially sell or otherwise dispose of other city owned properties used currently.

DECISION MAKING METRICS:

FINANCIAL: Open

LEGAL: Open.

STRATEGIC PLAN: Deliver High Quality Reliable Infrastructure and Public Services.

COUNCIL ACTION REQUESTED: Approve Water Resource Study.

ATTACHMENTS:
1. BMI Study



Real People. Real Solutions.

Water System Study City of Howard Lake

BMI Project No.: 0W1.125362

Submitted by:

Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001
P: 507-625-4171
F: 507-625-4177

Certification

Water System Study

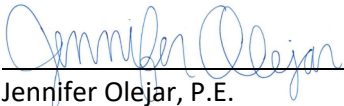
For

City of Howard Lake, MN

0W1.125362

February 2022

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By: 
Jennifer Olejar, P.E.
License No. 59177

Date: March 17, 2022

Table of Contents

I.	INTRODUCTION.....	1
A.	Background.....	1
B.	Purpose and Scope	1
C.	Water Demand Projection.....	1
D.	Source, Supply, and Capacity Evaluation.....	1
E.	Evaluation of Water Quality	1
F.	Water Treatment Options	2
G.	Water Storage.....	2
H.	Water Distribution.....	2
I.	Water Treatment Plant and Water Source Wells.....	2
J.	Staffing Review and Analysis	2
II.	WATER DEMAND PROJECTION	3
A.	Population Review.....	3
B.	Water Supplied	5
C.	Future Water Requirements.....	8
III.	WATER SOURCE, TREATMENT, AND CAPACITY EVALUATION	10
A.	Water Supply	10
B.	Raw Water Sources.....	10
C.	Water Quality	11
D.	Distribution System	11
E.	Existing Treatment Evaluation.....	11
F.	Finished Water Storage Evaluation	12
IV.	EVALUATION OF WATER QUALITY	15
A.	Introduction	15
B.	Existing Raw Water Quality	15
C.	Federal and State Rules Summary.....	15
D.	Recommended Treatment Objectives.....	18
V.	WATER TREATMENT OPTIONS.....	19
A.	Treatment Process Screening	19
B.	Improvement Items Common to All Alternatives.....	21
C.	Treatment Alternatives.....	22
D.	Future Capital Improvement Items	37
VI.	STAFFING REVIEW AND ANALYSIS	38
VII.	RECOMMENDATIONS AND CONCLUSIONS.....	39
A.	Treatment Alternatives Evaluation Discussion.....	39

B. Alternative Recommendation	40
C. User Rate Analysis	40
D. Financing Options	40
E. Implementation	41

Figures

Figure 2.1 GIS of Existing Water Main	4
Figure 2.2 Howard Lake Population and Population Projections	5
Figure 3.1 Well Pumpage Analysis	11
Figure 3.2 Current Chemical Feed.....	12
Figure 3.3 Photo of tower No. 1 on the left.....	13
Figure 3.4 Photo of tower No. 2 on the right.....	13
Figure 3.5 Analysis of Finished Water Storage and Projected Demand	14
Figure 5.1 Inclined Lamella Plate Gravity Settler	22
Figure 5.2 Gravity Filtration Process Flow	24
Figure 5.3 Gravity Filtration Layout Option 1	26
Figure 5.4 Gravity Filtration Layout Option 2	27
Figure 5.5 Lime Softening Process Flow.....	28
Figure 5.6 Lime Softening Layout Option 1.....	29
Figure 5.7 Lime Softening Layout Option 2.....	30
Figure 5.8 Reverse Osmosis Process Flow	33
Figure 5.9 Reverse Osmosis Layout Option 1	34
Figure 5.10 Reverse Osmosis Layout Option 2	35

Tables

Table 2.1 - 2018 Population Projections	5
Table 2.2 - Historical Total Yearly Pumpage	6
Table 2.3 - Historical Maximum Daily Well Pumpage.....	6
Table 2.4 - Average Daily Water Pumpage (Gallons per day)	7
Table 2.5 - Historical Annual Peak Water Pumpage	7
Table 2.6 - Per Capita Water Usage	8
Table 2.7 - Max Per Capita Water Usage	8
Table 3.1 - Water Supply Well Information	10
Table 3.2 - Summary of Water Quality Data.....	11
Table 3.3 - Summary of Water Storage.....	14
Table 4.1 - Summary of Water Quality Data	15

Table 4.2 - MCLGs and MCLs for Disinfection Byproducts.....	17
Table 5.1 - Alternative Treatment Technology Summary.....	19
Table 7.1 - Decision Matrix	39
Table 7.2 – Project Cost	39
Table 7.3 - Sample Implementation Schedule	42

Appendix

Appendix A: Raw Water Quality

Appendix B: National Primary and Secondary Drinking Water Regulations Summary

I. INTRODUCTION

A. Background

The City of Howard Lake has provided drinking water by wells since 1970 and installed a water treatment plant for iron and manganese removal in 1988. The city currently has two water supply wells which provide drinking water to the city's residents and has two elevated storage tanks for storage. The water supply wells have concentrations of manganese which exceed the Minnesota Department of Health (MDH) health-based value of 100 ug/L.

The current treatment plant includes chemical oxidation, gravity filtration, fluoridation, and chlorine disinfection. In 2015, the City of Howard Lake completed \$150,000 worth of improvements to the existing water system to extend its operation until a new facility is constructed.

B. Purpose and Scope

The City of Howard Lake has engaged Bolton & Menk to evaluate the water supply and treatment options through the typical 20 year design period. A new facility is planned to be constructed in 2025 which would replace the city's existing water system, which has surpassed its design life of 25 years.

The purpose of this Drinking Water Study is to provide the City of Howard Lake with necessary information regarding existing water supply, storage, and treatment. The City of Howard Lake can utilize the information gathered here to establish priorities, plan, fund, and implement future water system improvements. This report will look at the city's current and projected future supply, demand, treatment, and distribution. This report will review the current and potential future drinking water standards and evaluate options which the city can utilize to continue to meet those standards. This report will provide a roadmap of how the city has provided safe drinking water to its customers, and how it can continue to do so in the future.

C. Water Demand Projection

Drinking water demand projections based on historical population and historical water demand show anticipated average day and maximum day water demand will be approximately 281,000 gallons per day (gpd) and 1,122,000 gpd for the year of 2045. These projections are only for the City of Howard Lake and are discussed later in the report.

Section II provides a detailed evaluation of the city's water demand projections.

D. Source, Supply, and Capacity Evaluation

Howard Lake draws groundwater from a glacial sand and gravel aquifer found approximately 90 feet below the land surface. The city currently has two water supply wells (well No. 3 and No. 4) which provide drinking water to the city's residents, and three wells which are abandoned due to naturally high levels of arsenic and radionuclides. The City of Howard Lake has a total well capacity of 780 gallons per minute (gpm) and a firm well capacity of 380 gpm.

E. Evaluation of Water Quality

The raw water drawn from the existing wells has poor quality with iron, manganese, and arsenic levels which exceed the maximum contaminant levels (MCLs). This is typical for this area of the state, and a significant water quality improvement in future wells should not be expected. The city will be able to lower these contaminant levels to within the recommended range by water treatment. Arsenic removal is necessary for the water to meet primary

drinking water standards. The removal of iron and manganese is also recommended to achieve secondary drinking water standards which meet public expectations. This will limit complaints of water taste, water staining, and will encourage consumer use.

Section IV evaluates the city's existing water quality.

F. Water Treatment Options

The City of Howard Lake's existing water treatment facility includes chemical oxidation to remove metals, gravity filtration, fluoridation for dental health, and chlorine disinfection.

Removal of arsenic takes priority as it is highly toxic in its inorganic form. The MCL for arsenic is 10 µg/L and the water supply is approximately 20 µg/L arsenic. Chronic exposure to arsenic through drinking water can lead to cancer, diabetes, skin lesions, and negatively impact cognitive development.

Manganese should also be prioritized for removal due to MDH 2020 health-based guidance. The guidance sets a secondary maximum concentration level of 0.05 mg/L. This guidance was implemented because of the potential adverse health effects due to chronic exposure of Manganese from drinking water.

The raw water from the wells is also high in iron. Iron should be removed to avoid taste or odor issues, which are a common source of complaints.

Further discussion on the city's current treatment of drinking water can be found in Section V.

G. Water Storage

The city has two steel elevated storage tanks. Tank No. 1 has a capacity of 75,000 gallons and was constructed in 1947. Tank No. 2 is larger and was constructed in 2000 with capacity of 250,000 gallons. The total available storage volume is 325,000 gallons.

Future maintenance of tank No. 1 is expected to be extensive due to the lead coating on the tower. Due to the lead coating and future water demand, it is recommended to replace the older 75,000 gallon tank with a new tank. As a result, the newer 250,000-gallon storage tank, which is in good condition, will serve as the base storage facility.

H. Water Distribution

The existing watermain system consists of piping ranging between 4" to 12". Pipe materials include PVC, cast iron, and ductile iron. There are approximately 98,000 feet of pipe in the city. The majority of the watermain was installed between 1967 and 2011. The city is addressing watermain replacement in the capital improvement plan. All future constructed mains should be at least 8 inches in diameter to account for fire emergencies.

I. Water Treatment Plant and Water Source Wells

The water treatment facility in Howard Lake has a treatment capacity of 170 gpm or 204,000 gpd which is adequate to meet current average demand of 182,000 gpd (152 gpm). However, this does not meet maximum demand of 762,000 gpd (635 gpm). Due to the age of the current wells and future water demand increases, new wells and a new water treatment facility should be constructed.

J. Staffing Review and Analysis

The City of Howard Lake currently employs one operator. Section VI will evaluate the additional staffing needs for the variety of different treatment plant options.

II. WATER DEMAND PROJECTION

A reliable estimate of the quantity of water required for residential, commercial, and industrial uses within the city water system service area must be made before the system can be designed to transport, treat, and distribute these flows. The development of future water requirements is based on several factors, including past population trends, future population projections, water use trends, water quality, and water system capacity. These factors are reviewed in this report to develop and estimate future water requirements. City documents and records provided the primary data for the evaluation.

A. Population Review

There is a close relationship between the population of a community and total water consumption volumes. Future water sales can be expected to generally reflect future changes in the service area population. Similarly, commercial, public, and industrial water consumption will also tend to vary proportionately with the observed population growth of the city.

1. Service Area

The City of Howard Lake is located in Wright County on the western edge of the Twin Cities metro area. The City of Howard Lake is anticipating significant residential development. The significant industrial users will be addressed with individual agreements. The existing water system is shown in Figure 2.1.

2. Planning Period

It is not feasible to make frequent changes to the capacity of supply, storage, treatment, or distribution of water for a municipality. Typically, infrastructure and facilities are designed for a 20-year period. The planning period used in this study ends the year 2045. Population is the primary basis of determining future municipal flows.

3. Population Trends and Projections

The population of Howard Lake has grown slowly over the years. The Minnesota State Demographer Center (SDC) provides historical population information for counties, cities, townships, and projections for the county. This information can be extrapolated using a variety of mathematical projections including arithmetic, geometric, and linear regression models. In 2018, Bolton and Menk and the city discussed future growth and determined two possible scenarios for the City of Howard Lake. The first scenario is based on the historical population as a percentage of the total county population, and the second is based on the historical average growth of the city.

The Table 2.1 and Figure 2.2 reflect the population projections based on the two scenarios.



Table 2.1 - 2018 Population Projections		
Year	Population as % of County	Population Based on Average Growth
2017	2,064	2,064
2020	2,738	2,229
2025	2,836	2,407
2030	2,915	2,600
2035	2,986	2,808
2040	3,045	3,033
2045	3,097	3,275

*Table from 2018 Wastewater Howard Lake population projection

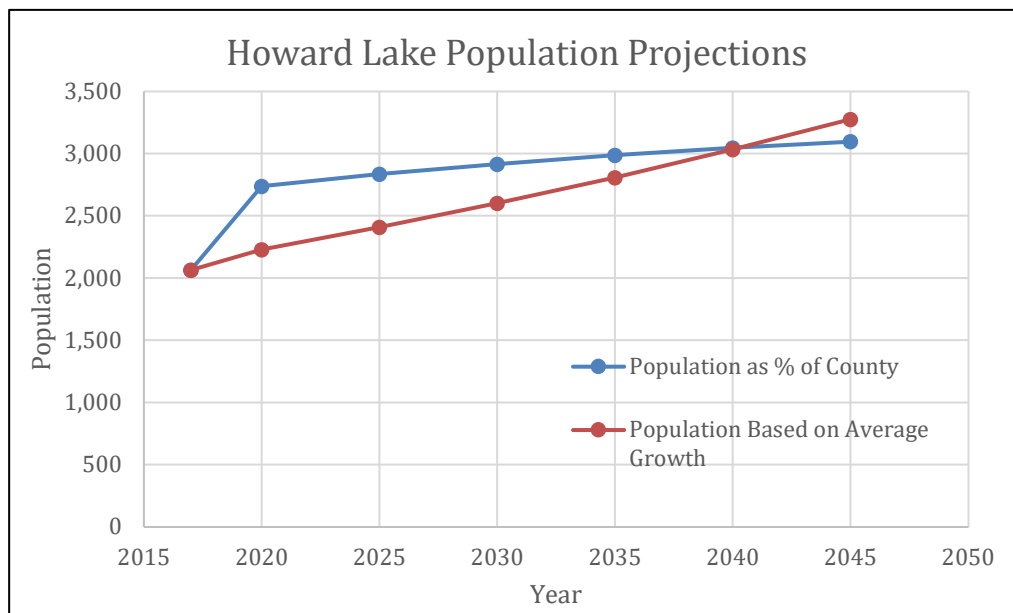


Figure 2.2 Howard Lake Population and Population Projections

B. Water Supplied

A water pumpage and consumption review can provide insight into the past development of a water system and water utilization trends. Pumpage represents the quantity of water which is appropriated from the supply source and delivered into the production and distribution facilities. Consumption represents the quantity of water utilized by utility customers. In the following subsection, the material, pumpage, and consumption information is reviewed and evaluated to aid in estimating future water requirements.

1. Water Pumped History

Pumping data was obtained from monthly operating reports provided by the city and the DNR Permit and Reporting System (MPARS) for the public water supply Appropriations Permit Number 1984-3227.

Table 2.2 and 2.3 summarize historical raw water pumpage on a total yearly and maximum daily basis for the City of Howard Lake. Table 2.4 summarizes average historical raw water pumpage on a monthly and yearly basis. An average of 66.4 million gallons (MG) per year or about 0.21 million gallons per day (MGD) was pumped by the city. The maximum amount of raw water pumped in one day was 0.76 MGD on November 4th, 2020.

Table 2.2 - Historical Total Yearly Pumpage			
Year	Total Water Pumped to the City (Gallons per year)		
	Well 3	Well 4	Total
2016	26,120,000	22,624,000	48,744,000
2017	30,782,000	29,869,000	60,651,000
2018	40,625,000	31,923,000	72,548,000
2019	53,049,000	21,502,000	74,551,000
2020	60,132,000	15,517,000	75,649,000
Average	42,141,600	24,287,000	66,428,600

Table 2.3 - Historical Maximum Daily Well Pumpage				
Year	Max Day (Gallons per day)			
	Well 3	Well 4	Total	Date
2016	216,000	306,000	522,000	May 5
2017	178,000	388,000	566,000	October 25
2018	235,000	421,000	656,000	October 10
2019	264,000	442,000	706,000	May 7th
2020	336,000	426,000	762,000	November 4
5-yr Max Day	336,000	442,000	762,800	

Table 2.4 - Average Daily Water Pumpage (Gallons per day)					
Month	2016	2017	2018	2019	2020
January	127,700	121,500	176,000	194,300	181,000
February	121,000	119,800	160,800	198,600	185,800
March	113,500	121,400	164,400	196,900	192,600
April	127,300	130,100	174,300	211,700	191,300
May	149,500	149,100	216,000	219,100	221,500
June	149,600	185,500	224,600	222,600	259,000
July	163,500	233,800	224,400	231,800	254,200
August	136,800	184,000	229,700	227,600	232,000
September	128,800	189,300	204,500	194,300	209,400
October	134,600	193,100	198,500	174,500	203,000
November	120,100	182,600	196,433	178,200	177,200
December	124,500	176,200	207,000	194,200	172,400
Annual Average	133,200	166,200	198,800	204,200	206,700
5-yr Average	181,800				

2. Historical Peaking Factor

A maximum day peaking factor for a water system is the ratio of the peak-day water demand to the average-day water demand. Peaking factors are a useful way to help determine an actual temporal change in water demand. If water usage increases during a specific time of year, like for summer irrigation, then peaking factors will be similarly large each year. However, if there are watermain breaks or other distribution issues, peaking factors may vary significantly from year to year and may not occur during the same season. Typical maximum day peaking factors range from 1.5 to 3.0. Smaller cities tend to have higher peaking factors due to summer peaks when irrigation and recreational activities increase water usage, and there are no large industrial users to balance the summer peaks.

The peaking factor for the City of Howard Lake was calculated by taking the maximum day pumpage and dividing it by the average pumpage for each year between 2016-2020. The maximum peaking factor for the five years listed was 3.92, therefore a peaking factor of 4 was used in this study.

Table 2.5 - Historical Annual Peak Water Pumpage			
Year	Average Day Pumpage (gpd)	Peak Day (gpd)	Peaking Ratio
2016	133,200	522,000	3.92
2017	166,200	566,000	3.41
2018	198,800	656,000	3.30
2019	204,200	706,000	3.46
2020	206,700	762,000	3.69
Average	181,820	-	-
Maximum	-	762,000	3.92

3. Per Capita Water Usage

The historical per capita water usage can be derived from previous information on population and water usage. This historical per capita water usage for Howard Lake has ranged from 64.9 to 337 gallons per capita per day (gpcd) with a five-year average of 85.6 gpcd as can be seen in Table 2.6 and 2.7. The per capita values will be used to project future water usage.

Table 2.6 - Per Capita Water Usage			
Year	Average Day Pumpage	Population	Gallons per person per day
2016	133,200	2053	64.9
2017	166,200	2064	80.5
2018	198,800	2082	95.5
2019	204,200	2139	95.5
2020	206,700	2,260	91.5
Average	-	-	85.6

Table 2.7 - Max Per Capita Water Usage			
Year	Max Day Total Pumped (gpd)	Population	Gallons per Capita per Max Day
2016	528,000	2053	257
2017	566,000	2064	274
2018	588,000	2082	282
2019	641,000	2139	300
2020	762,000	2,260	337

C. Future Water Requirements

Average day demand and peak day demand are important to the design of water treatment facilities. Maximum hour demand seldom lasts longer than a few hours, and the impact is primarily felt in the distribution and storage systems. With a treatment facility capacity of 204,000 gpd, the city is not capable of meeting its estimated average 2045 water demand. The city will need to increase its treatment facility capacity and well capacity to meet 2045 demand. Once the average day demand nears storage capacity, the storage system will become stressed under minimum and peak demand conditions.

1. Demand Distribution

Water demands at any potable water facility are variable. Demands vary throughout the day and throughout the year. Annually in Minnesota and other midwestern states, heaviest water demand occurs during the summer months when irrigation increases and when the recreational activities like swimming increase water usage.

Water demand varies by season and fluctuates throughout the day. Commercial and industrial users are typically more consistent and predictable regarding daily uses since industry follows strict operating hours. Residential demands are less predictable and do not naturally follow strict schedules. Typical residential demands increase after

daybreak, often peaks by late afternoon when lawn watering, meal preparation, and laundering occurs, then decreases during the evening hours.

Due to the variability in water demand, a minimum storage capacity should be equal to the average day demand. This is a recommendation of the Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers in the *Recommended Standards for Water Works* (commonly referred to as *Ten States Standards*). The Minnesota Department of Natural Resources (DNR) requires water supply design meet these standards. The City of Howard Lake does not meet these design criteria for the design period of 2045 and the storage will need to be expanded to meet these requirements.

Storage tanks are used to help supplement the water supply during peak demand. Potable water storage is also useful to supply water during a fire. When water demand is low, typically early morning, excess water is produced and stored. If demand exceeds the production rate, the stored water can make up the supply deficit. The storage tank will again fill once demand lowers, and the storage cycle continues.

2. Average Day Demand

Average day demand is the total quantity of water required annually divided by 365 days. The future average day demand for the City of Howard Lake was computed by taking the design year population (3,275 in 2045) and multiplying it by the design year per capita water usage.

$$\begin{aligned} 20 \text{ Year Design Year AD Demand (2045) (City of Howard Lake)} \\ &= \text{Design Year Population} \cdot \text{Design Usage} \\ &= 3,275 \text{ persons} \cdot 85.6 \text{ gallons/person} \\ &= 281,000 \text{ gallons per day (gpd)} \end{aligned}$$

3. Maximum Day Demand

Seasonal fluctuations in water usage are important factors in designing and sizing water supply and storage facilities. Maximum water demands usually occur during the summer months during hot days and when additional water is used for lawn irrigation, gardening, bathing, and industrial cooling. The maximum day demand is simply the amount of water pumped during a single day of the year with the highest water usage and is often expressed as a ratio of the annual average day pumpage. This ratio is known as a peaking factor. The maximum day pumpage is of particular importance to water system planning because water supply facilities are sized to meet this demand.

Yearly peaking factors for Howard Lake are presented in Table 2.5. This study projected future demand variations would resemble the variations observed over the historical analysis period. To evaluate future water supply and storage needs, a peaking factor of 4 was used for this study.

$$\begin{aligned} 20 \text{ Year Design Year MD Demand (2045)(City of Howard Lake)} \\ &= \text{Design Year Population} \cdot \text{Design Usage} \cdot \text{Peaking Factor} \\ &= 3,275 \text{ persons} \cdot 85.6 \text{ gallons/person} \cdot 4 \\ &= 1,122,000 \text{ gallons per day (gpd)} \end{aligned}$$

III. WATER SOURCE, TREATMENT, AND CAPACITY EVALUATION

A. Water Supply

Water is supplied to the storage and distribution systems using two water wells in the city. Water sources, supply capacity, quality, distribution, treatment, and storage will be evaluated in this section. In Section II, the average day and maximum day demand for the City of Howard Lake is projected to be 281,000 gpd and 1,122,000 gpd by the year 2045. The design capacity of the well pumps is approximately 936,000 gpd, which indicates additional water supply sources are needed to meet the demand for the design period.

B. Raw Water Sources

Howard Lake draws groundwater from a glacial sand and gravel aquifer found approximately 90 feet below the land surface. The city has two wells to supply water to the city. Table 3.1 summarizes these raw water sources.

Table 3.1 - Water Supply Well Information							
Local Well ID	Pump Rate (gpm)	Casing Diameter (inches)	Casing Depth (feet)	Well Depth (feet)	Date Constructed/ Reconstructed	Aquifer	Well Vulnerability
Well #3	380	12	138	148	2/1/1970	Quaternary Buried Artesian Aquifer	Not Vulnerable
Well #4	400	12	93	131	6/9/1988	Quaternary Buried Artesian Aquifer	Not Vulnerable

*Table from 2020 Hydrogeologic Assessment of the Drinking Water Source and Wells for the City of Howard Lake

1. Summary of Existing Supply Capacity

The current total pump capacity for Howard Lake is approximately 936,000 gpd. It is occasionally necessary to take a pump out of service for a period of several days to several weeks for maintenance. Firm capacity is considered as the total available delivery rate with the largest pumping unit out of service. The firm pumping capacity for the City of Howard Lake is 456,000 gpd.

- Estimated Total Well Capacity: 936,000 gpd
- Estimated Firm Capacity: 456,000 gpd

However, these capacities are never reached, as the treatment capacity is lower at 204,000 gpd. The existing pumps will not be sufficient in the future. This is due to the age of the pumps and the current supply firm capacity of 456,000 gpd. Figure 3.1 provides a well pumpage analysis.

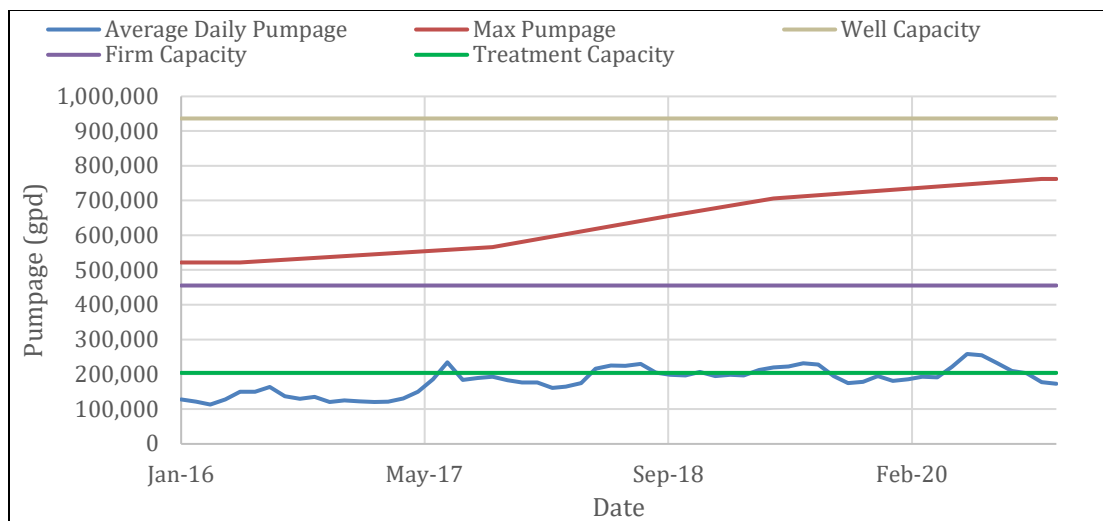


Figure 3.1 Well Pumpage Analysis

C. Water Quality

The raw water from both wells is high in arsenic, manganese, and iron.

Table 3.2 - Summary of Water Quality Data			
	Iron (mg/L)	Manganese (mg/L)	Arsenic (mg/L)
MCL Level	0.3	0.05	0.010
Well #3	0.55	1.134	0.0226
Well #4	0.40	0.304	0.0167

The MCL for arsenic is 0.010 mg/L and the water supply is approximately 0.020 mg/L arsenic. Chronic exposure to arsenic through drinking water can lead to cancer, diabetes, skin lesions, and negatively impact cognitive development.

Manganese should also be prioritized for removal due to MDH 2020 new health-based guidance. This guidance is due to the possible health effects of chronic exposure above concentrations of about 0.3 mg/L and concentrations of 0.1 mg/l for those less than 1 year old. Iron should also be removed to meet secondary consumer standards.

D. Distribution System

The existing watermain system consists of piping ranging between 4" to 12". Future improvements to the distribution system, including replacements and extensions, will be 8" or larger to provide adequate flow in fire or emergency situations. There are almost 98,000 feet of pipe in the city. The majority of the watermain was installed between 1967 and 2011.

E. Existing Treatment Evaluation

1. Capacity

Based on historical data, Howard Lake needs to expand the treatment capacity of the water system to ensure adequate finished water supply to residents. The current treatment capacity of the existing facility is 170 gpm, which will not meet 2045 demand. In addition to new wells, a new water treatment facility should be constructed to meet future demand and ensure operability through 2045.

2. Chemical Feed

The chemical feed systems are maintained by the city and are repaired as needed. The current treatment plant includes chemical oxidation with potassium permanganate,

fluoridation, and chlorine disinfection. Figure 3.2 shows the chemical injection into water treatment system prior to distribution.



Figure 3.2 Current Chemical Feed

3. Electrical and Controls

The electrical system is designed for the current water treatment facility. The electrical system must remain operational during construction and will require upgrades for a new treatment facility.

F. Finished Water Storage Evaluation

Water storage is used to provide a constant supply of water and pressure during variable demand conditions. During high demand periods, part of the demand can be met by storage reserves. During low demand conditions, the high service pumps continue to operate with excess supply going to fill the storage tanks for future demands. Storage is also used as an emergency water source in the case of supply failure (such as power outage, intake repair, or raw water transmission main breaks) or during a fire.

Howard Lake has two elevated water storage tanks, with a total storage volume of 325,000 gallons for finished water storage. Table 3.3 lists information about the existing finished water storage facilities.

1. Condition

The two water towers are inspected annually. Tower No. 1 is due to be recoated and Tower No. 2 is scheduled to be painted in 2029. It is recommended the city maintain the cleaning and inspecting each tower every two years and plan for a complete repaint of the towers every 20 years. Due to the age and condition of Tower No. 1, it should be decommissioned and replaced.



Figure 3.3 Photo of tower No. 1 on the left.

Figure 3.4 Photo of tower No. 2 on the right.

2. Capacity

The existing towers supply Howard Lake with 325,000 gallons of storage. There are several criteria used to determine the storage requirements for a system. The Ten States Standards has the following recommendations:

“Storage facilities should have sufficient capacity, as determined from engineering studies, to meet domestic demands, and where fire protection is provided, fire flow demands.

- a. The minimum storage capacity (or equivalent capacity) for systems not providing fire protection shall be equal to the average daily consumption. This requirement may be reduced when the source and treatment facilities have sufficient capacity with standby power to supplement peak demands of the system.
- b. Excess storage capacity should be avoided to prevent potential water quality deterioration problems.
- c. Fire flow requirements established by the appropriate state Insurance Services Office should be satisfied where fire protection is provided.”

Table 3.3 - Summary of Water Storage				
Structure Name	Type of Storage Structure	Year Constructed	Primary Material	Storage Capacity (gallons)
1	Elevated Storage	1947	Steel	75,000
2	Elevated Storage	2000	Steel	250,000
Total				325,000

The Ten States Standards recommend having a minimum storage capacity of the average day demand. The current storage of 325,000 gallons is larger than current and expected average day demand. However, with the recommendation to decommission the 1947 tank, the city would only have 250,000 gallons of storage. Average day demand is expected to exceed this by 2037. In this situation the water supply would be supplemented by drawing from additional wells or utilizing emergency connections.

Fire flow analysis requires a flow of 3,000 gpm for 3 hours, on top of the average demand. The fire flow storage requirements would be 600,000 gallons in 2045 with the current treatment capacity of the plant. With the proposed expansion of the treatment capacity, storage needs decrease. The proposed expansion would require storage of at least 450,000 gallons.

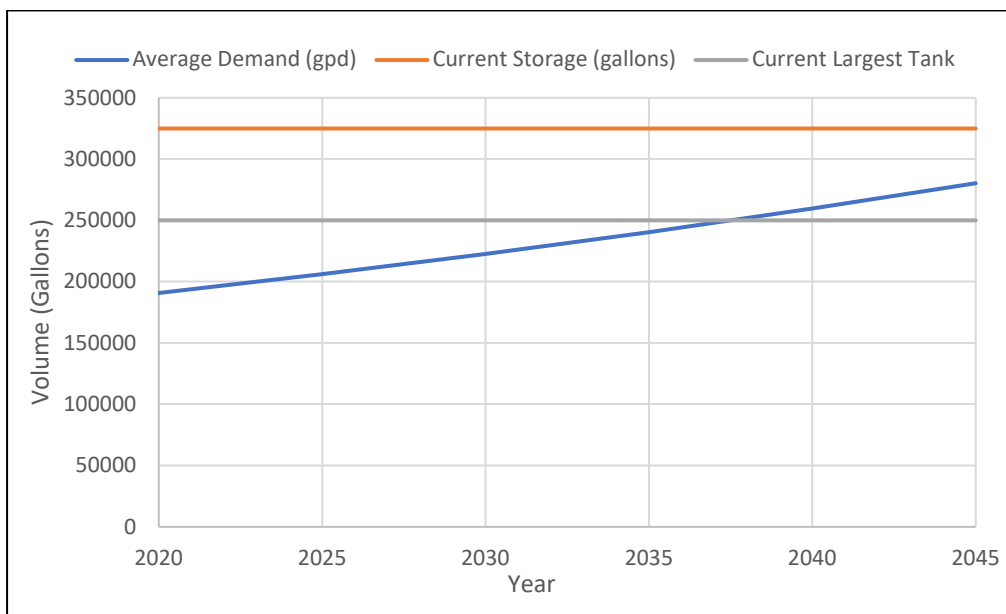


Figure 3.5 Analysis of Finished Water Storage and Projected Demand

3. Emergency Power

The current facility has a generator which provides emergency power. The generator is sufficient for the existing plant but will need to be upgraded with future expansion projects.

IV. EVALUATION OF WATER QUALITY

A. Introduction

Due to the concern for safe drinking water, many federal and state agencies have instituted statutes which regulate drinking water quality. Finished water must meet local community standards regarding taste, odor, hardness, and color. The Environmental Protection Agency (EPA) has recently been reducing concentrations of contaminant such as nitrogen and phosphorus. The United States EPA provides guidelines for producing and supplying safe drinking water.

Included in this section are discussions related to the raw water quality in the City of Howard Lake as well as water treatment rules and regulations. These treatment regulations assist in identifying the water treatment objectives used in evaluating water treatment. Discussions are presented to evaluate the existing raw water quality and the state and federal regulations impacting the Howard Lake Water Treatment Facility.

B. Existing Raw Water Quality

The water of Howard Lake is supplied by two shallow wells. The water quality from these wells is generally suitable for municipal use only after treatment since arsenic exceeds primary standards and iron and manganese exceed secondary standards. Concentrations of arsenic, iron, and manganese can all be lowered into the recommended range by treatment. Table 4.1 summarizes the raw water quality.

Table 4.1 - Summary of Water Quality Data			
	Iron (mg/L)	Manganese (mg/L)	Arsenic (mg/L)
MCL Level	0.3	0.05	0.010
Well #3	0.55	1.134	0.0226
Well #4	0.40	0.304	0.0167

C. Federal and State Rules Summary

The United States Environmental Protection Agency (EPA) has established basic water quality rules to protect public health. The Minnesota Department of Health is used to enforce the water quality rules.

Relevant rules and regulations include:

- Safe Drinking Water Act (SDWA)
- National Primary Drinking Water Regulations (NPDWRs)
- Stage 1 and Stage 2 Disinfectants and Disinfection By-Products Rules (DBPRs)
- Revised Total Coliform Rule (RTCR)
- Radionuclide Rule
- Drinking Water Contaminant Candidate List (CCL)
- Secondary Drinking Water Standards

This report focuses on evaluating the water quality as it pertains to the primary and secondary drinking water standards.

1. Safe Drinking Water Act (SDWA)

Through the passage of the Safe Drinking Water Act (SDWA) in 1974, the U.S. Congress authorized the United States Environmental Protection Agency (EPA) to establish drinking water regulations to all public water systems in the United States. State governments are responsible for implementing and enforcing the Act's provisions through their health departments and environmental agencies.

Under the SDWA, the EPA initially proposed the National Interim Primary Drinking Water Regulations (NIPDWR). The regulations were referred to as "interim" because the regulations were to be revised upon further research and special studies. The interim regulations were adopted as the National Primary Drinking Water Regulations (NPDWRs) upon the passage of the 1986 Amendments to the SDWA. There were 83 contaminants to be regulated at that time.

Changes were made to the SDWA by the 1996 amendments. These amendments retained most of what the NPDWRs previously enacted. The 1996 amendments did change the process for selecting contaminants to be regulated and did mandate new rules regarding arsenic, uranium, radon, and groundwater disinfection. The 1996 amendments placed an increasing emphasis on ensuring all new and existing water systems have the technical, managerial, and financial capacity to comply with NPDWRs. Systems which do not commit the resources required to comply with these rules may not be eligible for Drinking Water State Revolving Fund (DWSRF) loans and may be vulnerable to enforcement actions. There are currently over 90 parameters regulated by the SDWA.

The regulations discussed below fall under the Safe Drinking Water Act, as the SDWA provides the process the EPA must follow to create drinking water regulations.

2. National Primary Drinking Water Regulations (NPDWRs)

National Primary Drinking Water Regulations (NPDWRs) are the enforceable standards (maximum contaminant levels and treatment techniques) with which water suppliers must comply. Currently, there are standards for more than 90 contaminants, including turbidity, 6 other microorganism indicators, 4 disinfection byproducts, 3 disinfectants, 4 radionuclides, 16 inorganic contaminants, and 53 organic contaminants. The EPA is required to review and revise, as appropriate, each NPDWR every six years. The most recent review was completed in December 2016. Another review is currently in progress and is expected to be completed in 2023. Based upon the 2016 review, the EPA has identified Chlorite, Cryptosporidium, Giardia lamblia, and Haloacetic Acids (HAA5) rules as candidates for revision. Appendix B includes a summary of all standards for regulated contaminants.

3. Stage 1 and Stage 2 Disinfectants and Disinfection By-products Rules (DBPRs)

In December 1998, the EPA established maximum residual disinfectant levels for water systems which use a chemical disinfectant under the Stage 1 Disinfectants and Disinfection Byproducts Rule (DBPR). The Stage 2 DBPR added to the Stage 1 Rule by increasing compliance monitoring requirements for Trihalomethanes (TTHM) and Haloacetic acids (HAA5). The maximum residual disinfectant level is 4.0 mg/L of chlorine as free chlorine. The compliance date for groundwater systems was November 2003. Maximum limits have been established to limit the health effects of disinfectant byproducts. Howard Lake has kept chlorine levels near 1.0 to 1.5 mg/L.

Table 4.2 shows the EPA's Exhibit II-I, which identifies the Maximum Contaminant Limits (MCL) and Maximum Contaminant Limit Goals (MCLG) for disinfection byproducts.

Table 4.2 - MCLGs and MCLs for Disinfection Byproducts		
Disinfection Byproduct	MCLG (mg/L)	MCL (mg/L)
Total Trihalomethanes (TTHM), consisting of:	ND	0.080
Chloroform	ND	ND
Bromodichloromethane	0	ND
Bromoform	0	ND
Dibromochloromethane	0.06	ND
Five Halo Acetic Acids (HAA5), consisting of:	ND	0.060
Monochloroacetic Acid	ND	ND
Dichloroacetic Acid	0	ND
Trichloroacetic Acid	0.3	ND
Monobromoacetic Acid	ND	ND
Dibromoacetic Acid	ND	ND
Chlorite	0.8	1.0
Bromate	0	0.010

ND – not determined

4. Revised Total Coliform Rule (RTCR)

EPA promulgated a Total Coliform Rule on June 29, 1989 and revised the Rule on February 13, 2013. This Rule applies to both surface water supplies as well as groundwater supplies. The Revised Total Coliform Rule became effective on April 1, 2016. The revised Rule establishes a maximum containment level for E. coli and uses E. coli and total coliforms to initiate a "find and fix" approach to address fecal contamination that could enter the distribution system. It requires public waste systems (PWSs) to perform assessments to identify sanitary defects and subsequently take action to correct any defects.

Recommended guidelines for total coliform control are:

- Maintenance of detectable disinfectant residual throughout the distribution system.
- Proper repair/replacement/maintenance of the distribution system

5. Radionuclide Rule

The EPA Radionuclide Rule went into effect in 1977 and was revised in 2000. This regulation requires monitoring and sets maximum contaminant levels for combined Radium 226 and Radium 228, Uranium, gross Alpha particles, and Beta/photon emitters. The overall goal of the rule is to protect customers from radionuclides.

6. Drinking Water Contaminant Candidate List (CCL)

The EPA has drinking water regulations for more than 90 contaminants, and the complete list is presented in Appendix B. The SDWA includes a process which the agency follows to identify new contaminants which may require regulation in the future. The EPA periodically releases a Contaminant Candidate List (CCL) with contaminants which need to be evaluated to determine if future regulation is necessary. The first list was published in March 1998 and had 60 unregulated contaminants. The fourth version of the list was published on November 17, 2016 and contains 97

chemicals or chemical groups and 12 microbial contaminants. This list includes, among others, chemicals used in commerce, pesticides, biological toxins, disinfection byproducts, pharmaceuticals, and waterborne pathogens.

7. Secondary Drinking Water Standards

In addition to the National Primary Drinking Water Regulations, which cover the contaminants that affect public health, EPA recommends Secondary Drinking Water Standards with recommended limits on contaminants that affect the aesthetic qualities of drinking water. The secondary regulations are intended to serve as guidelines and are not federally enforceable. Although water utilities are not required to treat to Secondary Drinking Water Standards, keeping the quality of drinking water within these guidelines makes it more acceptable to consumers, thereby decreasing customer complaints. The EPA Secondary Drinking Water Standards can be found in Appendix B.

D. Recommended Treatment Objectives

The raw water quality for the City of Howard Lake can be treated through conventional means. It is necessary the city reduce the levels of primary contaminants and recommended to reduce levels of secondary contaminants to comply with the current Drinking Water Standards. Treatment can be accomplished in the following ways:

- Gravity filtration
- Pressure filtration
- Lime softening with filtration
- Gravity filtration followed by reverse osmosis

It is recommended the city construct a new water treatment facility to reduce concentrations of manganese and arsenic. All four options can achieve the objective of removing arsenic, manganese, and iron. The city may also choose to soften the water and remove hardness.

Treatment alternatives are discussed in Section V.

V. WATER TREATMENT OPTIONS

A. Treatment Process Screening

The objective for the City of Howard Lake is to provide residents with safe and palatable water fit for domestic and commercial uses, while wasting minimal water in the process. This section summarizes alternative treatment processes and the benefits of each process. From this analysis, treatment trains were developed for detailed comparison. A summary of the ability of each treatment process to meet or aid in meeting the water quality objectives is given in Table 5.1.

Centralized water softening limits the treatment options for the city to reverse osmosis or lime softening. Home water softeners can remove hardness if residents choose to operate one. The issue with home water softeners is the cost to consumers and the increase in chloride load to the wastewater system, which can negatively impact the environment and is costly to remove.

Table 5.1 - Alternative Treatment Technology Summary				
Contaminant	Primary Treatment (Removal)			
	Gravity Filtration	Pressure Filtration	Lime and Soda Ash Softening with Filtration	Gravity Filtration and Reverse Osmosis (RO)
Iron and Manganese Removal	X	X	X	X
Hardness Removal			X	X
Chloride Production to WWTF	Residential Waste	Residential Waste	Some Waste (mostly removed as sludge to offsite)	Blended Concentrate Waste
Note: X = Process will achieve or aid in achieving the treatment goal for the indicated parameter				

1. Gravity Filtration

Filtration is a proven water treatment technology which has been used since the early 19th century and is a commonly used to remove iron and manganese. Since water from underground aquifers is in direct contact with rock and ground layers, the water has higher concentrations of iron, manganese, and hardness. Gravity filtration is one of the primary treatment techniques used to remove iron and manganese from ground water. Hardness is not removed using gravity filtration, so further treatment would be necessary to reduce hardness. Filters can be constructed out of concrete or steel.

Steel filters are less expensive and are a competitive option for small facilities, while concrete filters are more economical for larger facilities. Steel filters will need maintenance and recoating in 15-20 years, whereas concrete filters would service the community for the next 40 to 60 years. The life cycle analysis makes concrete filters more economical than steel filters for plants designed for a maximum day demand of approximately one million gallons. Due to the predicted 2045 maximum day demand for the City of Howard Lake, concrete filters would be more economical for the new treatment facility.

2. Pressure Filtration

Pressure filters are another common way to remove iron and manganese. These are enclosed vessels which force pressurized water through the filter media, usually sand. Like gravity filters, pressure filters do not soften water so additional treatment would be needed to reduce hardness. While pressure filters have a low initial cost, there are many disadvantages which come with pressure filters such as the inability to observe the filter while in operation and possible premature breakthrough of contaminants. Due to these concerns pressure filters are not recommended and were not investigated further.

3. Lime and Soda Ash Softening with Filtration

Lime softening can also remove iron and manganese from drinking water. In the presence of oxygen, the oxygen will react with these compounds to create ferric and manganic hydroxide which are then captured using filtration. The oxidation reaction rates for iron and manganese are accelerated by the high pH levels present in lime softening.

Lime softening is a process which requires an understanding of the chemical reactions occurring, additional testing, monitoring, and a significant amount of equipment, resources, and time. The lime softening process involves creating a lime slurry using water and a powdered lime source, feeding the slurry into a clarifier, allowing the chemical reactions to occur, and allowing the solids to settle out. The lime clarifier effluent water has a high pH which will need to be lowered through re-carbonation to stabilize the water and prevent scale deposits on the subsequent filter media. Lime softening will require additional staffing to operate the treatment system, treat the lime sludge, and will require additional staffing compared to typical gravity filtration facilities without softening.

4. Reverse Osmosis Membrane Filtration

Reverse Osmosis is another type of treatment process which offers the finest level of filtration available. The membrane acts as a barrier to all dissolved salts and inorganic molecules as well as most organic molecules with a molecular weight greater than 100. Water molecules can pass freely through the membrane which creates a purified effluent stream. The dissolved salts and molecules which remain on the opposite side of the membrane barrier flow out of the system as a concentrate or reject stream of water. The amount of water used for the concentrate stream varies from 5 to 30 percent of the total water supplied to the RO system but is generally in the 20 to 25 percent range.

5. Chlorine Disinfection

Primary disinfection at the City of Howard Lake Water Treatment Facility is currently accomplished by free chlorination. Chlorine is added prior to the water being pumped into the distribution system. The inactivation of microorganisms such as *Giardia lamblia*, *Cryptosporidium*, and viruses is based on contact time multiplied by the chlorine residual (CT). The required CT is a function of other water treatment parameters, such as the organism being inactivated, water temperature, and pH. Chlorine is applied not only to perform disinfection as part of the treatment process but also to provide residual disinfection in the distribution system. The free chlorine method of disinfection is relatively simple to use but can lead to the formation of disinfection by-products such as TTHMs or HAAs.

Chlorine could also be used for disinfection through chloramination. Chlorine is added to the water along with small amounts of ammonia, which react together to form chloramines. Chloramine is a long-lasting disinfectant which is relatively stable.

Chlorination requires a specific balance between chlorine and ammonia in the water supply. Sufficient chlorine must be added to react with the ammonia in the water supply and form chloramines for disinfection. However, if too much chlorine is added, monochloramines begin to breakdown dichloramines resulting in taste and odor issues. Due to the success using free chlorine, switching Howard Lake to a chloramine system is not recommended.

B. Improvement Items Common to All Alternatives

1. Additional Water Storage

As previously discussed, the 75,000 gallon storage tank built in 1947 should be decommissioned due to the age and condition. The Ten States Standards recommend having a minimum storage capacity of the average day demand. While 250,000 gallons of storage is sufficient for the current demand, the projected demand is expected to exceed the existing finished water storage capacity around 2037. It is recommended the city install a 250,000 gallon elevated storage tower and a clearwell at the proposed WTP to meet necessary usage and fire flow demands.

The elevated tank would serve as an additional pressure equalizer in the distribution system. However, if the projected growth of the city will not develop areas of low service pressure, ground storage may be sufficient. The economics of ground storage make it the most practical if it is built in conjunction with a new treatment plant.

2. New Water and Wastewater Piping

The source water wells, water storage structures, and the distribution system will need to be connected to the new WTF. The existing wastewater collection system should be adequate for any future WTF. However, sanitary sewer system improvements may be needed for the reverse osmosis option due to the amount and concentration of the reject water.

3. Plate Settlers for Water Reclaim

Howard Lake should install a package plate settling system in addition to the concrete backwash tanks. Plate settlers are used to increase the amount of water which can be reused and sent back to the treatment process instead of wasting it to the sewer. The plate settling system would have a smaller area footprint than a standard sedimentation basin due to the layers of plates which create additional surface area for settling within the unit. The plate settler is able to return about 98 percent of water, whereas about 85-90 percent is returned without the use of plate settling. See Figure 5.1.

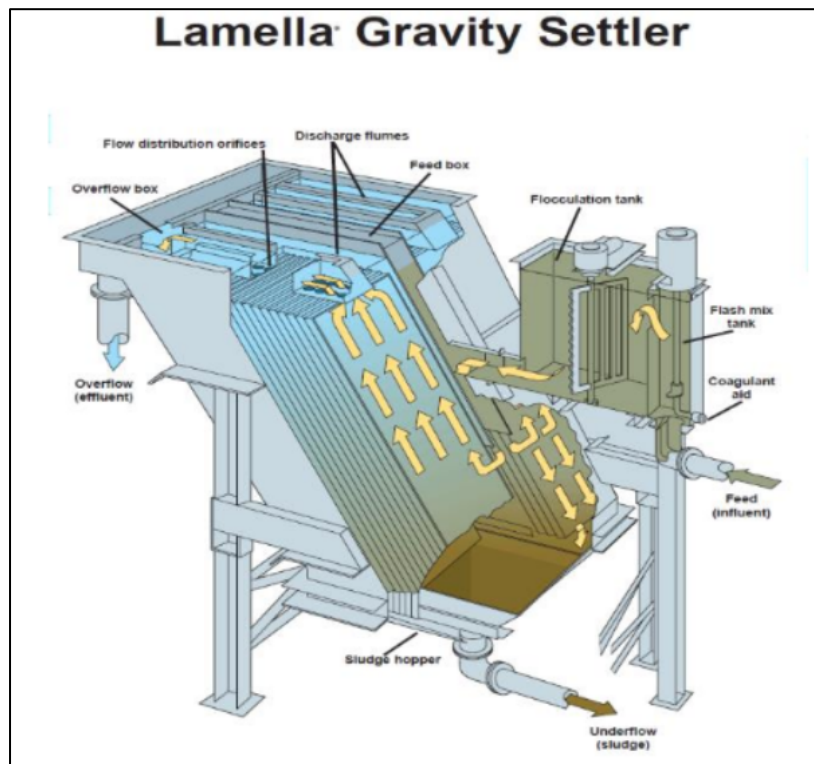


Figure 5.1 Inclined Lamella Plate Gravity Settler

C. Treatment Alternatives

After considering the treatment goals and process alternatives, three specific treatment alternatives were developed. Pressure filter systems were not considered due to the priorly mentioned issues. These alternatives are as follows:

1. Construct a new treatment facility using the gravity filtration
2. Construct new treatment facility using filtration and lime softening
3. Construct new treatment facility using filtration and reverse osmosis

The treatment process recommended for each alternative begins similarly – aeration and detention for iron oxidation, use of potassium permanganate for manganese oxidation, filtration for iron and manganese removal, followed by softening technology, chlorine for disinfection, the addition of fluoride, and addition of a corrosion inhibitor.

The average and peak facility flows in 2045 are predicted to be 281,000 gpd (235 gpm) and 1,122,000 gpd (935 gpm) respectively.

All options will include new water treatment buildings to house the treatment equipment and materials. Potential locations will be analyzed during a future water model study. Building, structure, layout, and sizing would be finalized during the design process and in consultation with the city.

1. Construct a New Gravity Filtration Process

This method includes the construction of a new gravity filtration process designed to remove iron and manganese as well as provide disinfection. The process flow for a gravity filtration process is shown in Figure 5.2.

The existing wells in combination with future wells are expected to provide sufficient water for current and future demands. A water treatment facility would be constructed to enclose the treatment processes and associated equipment and provide room for

expansion.

The process begins with the aerator. The aerator would be an induced draft aerator constructed of aluminum with PVC internal components and designed for the maximum flow rate. Water cascades downward through the aerator, releasing gases in the water, while oxygen is provided from the upward flowing of air which is drawn through the aerator by fans located on top of the structure. This type of aeration provides the most efficient oxidation and gas stripping, providing the greatest treatment flexibility. The water flows from the aerator to the detention basin.

The detention basin allows complete oxidation of the iron and would be sized for 40-minutes of detention time. Detention time provides iron additional time to form floc, resulting in more thorough and efficient filtration.

Water flows to newly constructed filter cells located in the treatment building. These concrete filter cells would consist of filter backwash troughs, gravel underdrains, support media, a Greensand Plus (or silica sand) layer, and an anthracite layer on top.

The filters would be designed in multiple units to allow taking a unit off-line for maintenance. The optimal design filtration rate is 2.0 gpm/sq. ft. The filter system would consist of four rectangular filters each with approximate dimensions of 13-feet by 13-feet. This design would process 1014 gpm with three of the filters operating.

The underdrain system would be designed to prevent scaling on the surface due to hard water. The backwash system would incorporate both air and water wash. The use of air in the backwashing system reduces the time and water volume required for backwashing. It also improves the cleaning of the media, reducing mud balls, and extending media life. A dedicated backwash pump would be used to provide water for backwashing and a dedicated blower would be used to provide air.

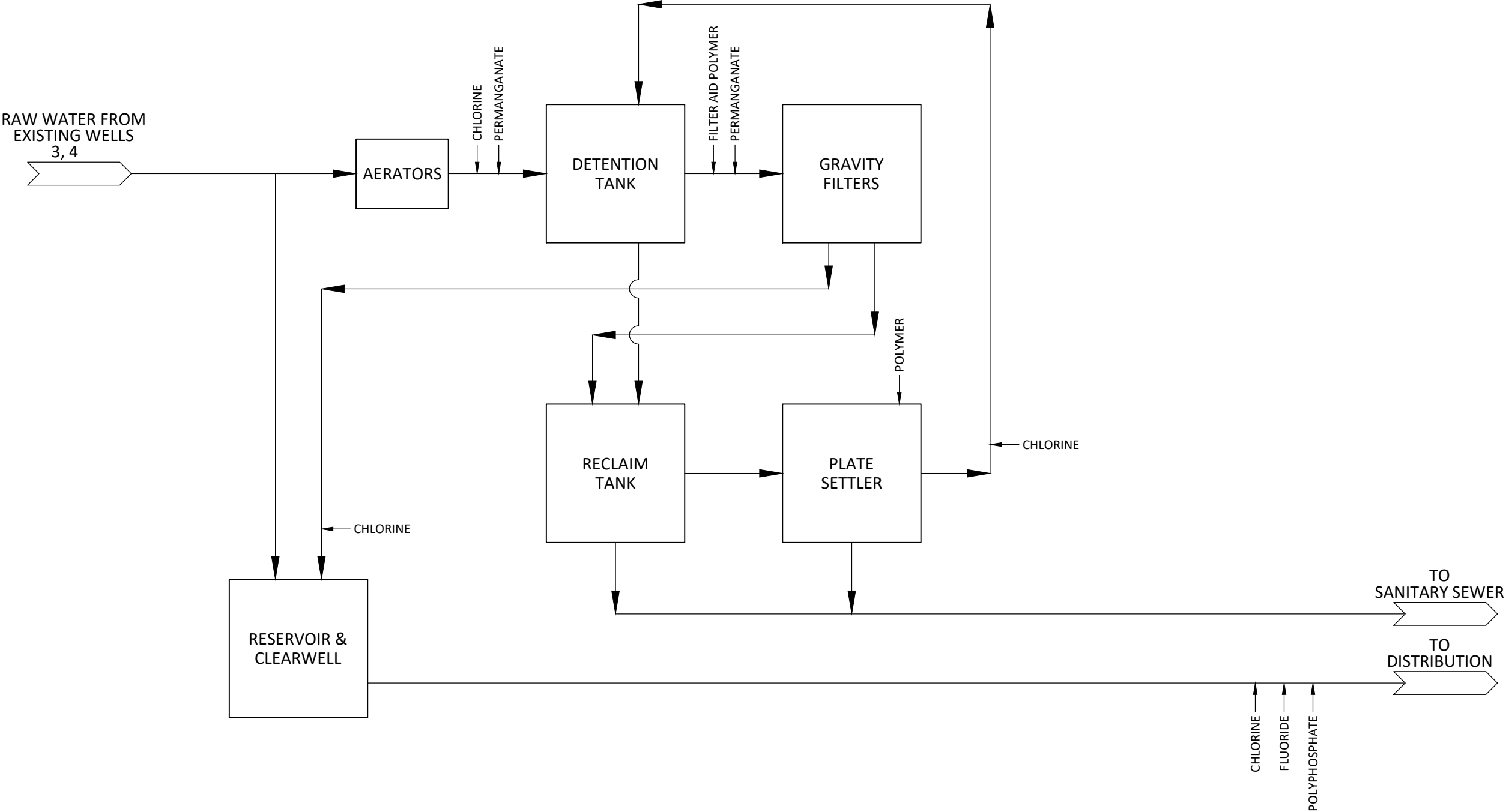
To minimize the amount of backwash water wasted and discharged, a backwash water plate settler reclamation system would be installed. The system would consist of a steel tank with inclined lamella settling plates to receive backwash water as it is discharged from the filters. Plate settlers increase the amount of water reused from about 85-90 percent, to about 98 percent. After settling, the clarified water is recycled and blended with the incoming raw water. Solids from the bottom of the tank would be discharged to the sanitary sewer.

A new two-chamber baffled clearwell, would be constructed to provide the appropriate contact time per chamber, and to provide storage for finished water and backwashing. New high service pumps would pump water from the clearwell to the distribution system and elevated storage tanks. Each pump will be provided with a variable frequency drive for flow adjustment.

Chemical feed systems will be installed. Potassium or sodium permanganate will be used for oxidation of metal ions present in the raw water. Chlorine will provide disinfection and residual disinfection in the distribution system. Fluoride will be added for dental health. Polyphosphate can be added to the effluent so residual iron and manganese might be sequestered after treatment or during bypasses.

The facility would include influent and effluent flow metering with integration of a SCADA system for the new and existing wells to monitor flows.

Emergency power will be added at the facility for backup use.



The facility will be designed with a common office/lab area to allow water sample analysis and record keeping. There will also be an operations control room and a restroom. A garage and work area could be constructed as part of the treatment building to allow the operators a place to park trucks and work on equipment.

Figures 5.3 and 5.4 show potential layouts for the new facility; the exact sizing of the layout would change once the design is determined. There are multiple layouts to consider, and the building structure, layout, and sizing would be finalized during the design process and in consultation with the city.

2. Construct a New Lime Softening and Gravity Filtration Treatment process

Alternative 2 consists of constructing a new facility with a lime softening treatment with two solids contact clarifiers. The two solids contact clarifiers provide operational flexibility and allow for maintenance on one clarifier while maintaining treatment.

The process flow for a lime softening process is shown in Figure 5.5, and the potential plant layouts are shown in Figures 5.6 and 5.7. The building structure, layout, and sizing would be finalized during the design process and in consultation with the city.

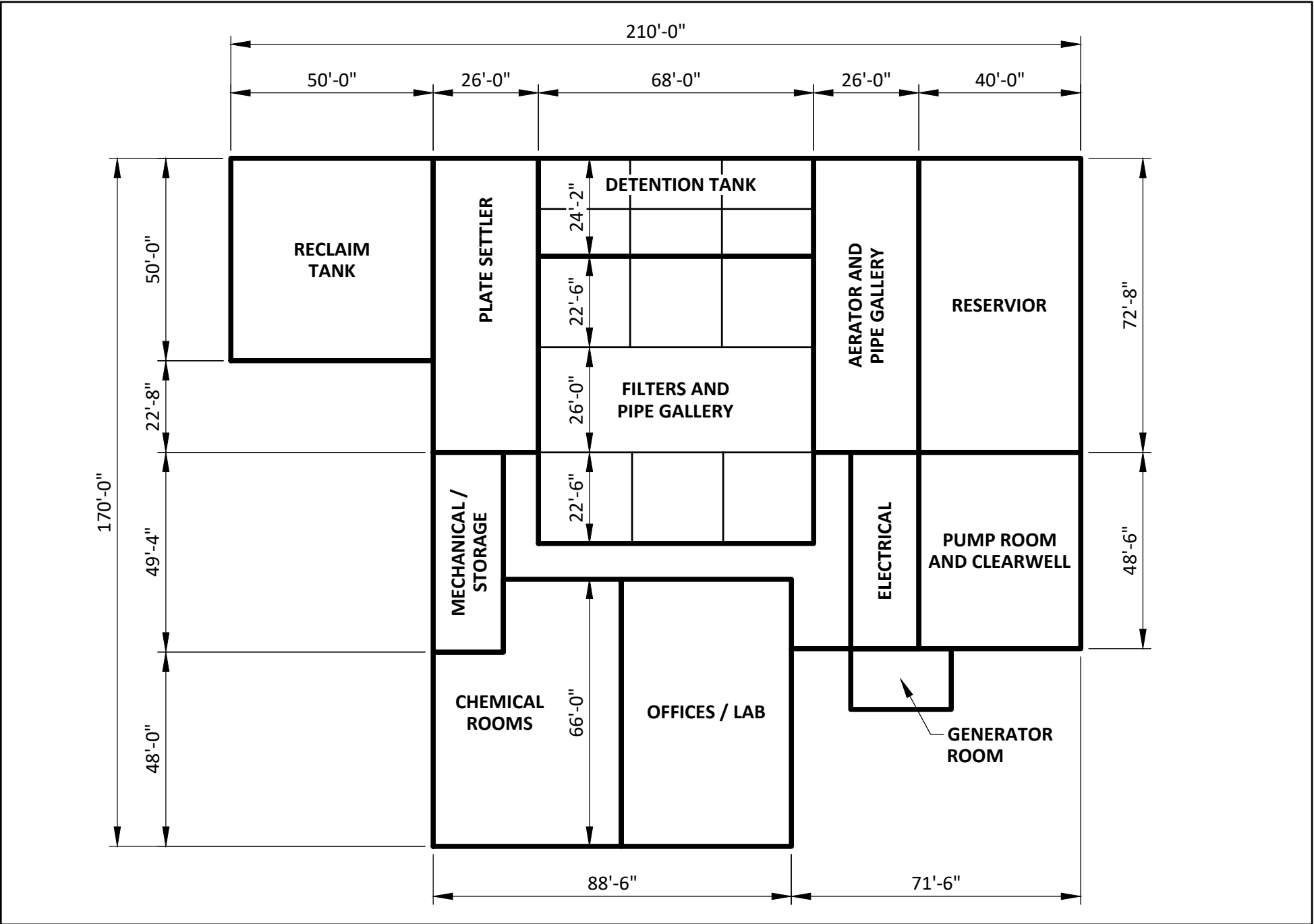
The existing wells in combination with future wells are expected to provide sufficient water for current and future demands. A water treatment facility would be constructed to enclose the treatment processes and associated equipment and provide room for expansion.

The aerator would be an induced draft aerator constructed of aluminum with PVC internal components and designed for the maximum flow rate. Water cascades downward through the aerator, releasing gases in the water, while oxygen is provided from the upward flowing of air which is drawn through the aerator by fans located on top of the structure. This type of aeration provides the most efficient oxidation and gas stripping, providing the greatest treatment flexibility.

Lime soda ash softening is a system which causes chemical precipitation of hardness ions to soften the water. Lime (calcium hydroxide) is used to remove chemicals which cause carbonate hardness and soda ash (sodium carbonate) is used to remove chemicals which cause non-carbonate hardness. Many municipal water systems use lime softening only and remove primarily carbonate hardness. The raw water of Howard Lake contains both calcium and magnesium hardness, which indicates a combined system of lime and soda ash softening would be the most effective.

The softening system would be provided with hydrated lime and soda ash storage, feeding equipment, upflow clarifiers for water softening, carbonic acid feed system, a basin for recarbonization, and lime sludge storage and disposal. Water is pumped into the lime clarifiers where it is mixed with hydrated lime and soda ash. The softened water then flows to a recarbonation basin where it receives a pH adjustment by liquid carbonic acid and is then pumped into the filtration system. This system requires a large building footprint and the storage of both raw lime and lime sludge on-site. This system could reasonably reduce hardness to less than 100 mg/L of hardness as CaCO_3 .

The filters would be designed in multiple units to allow taking a unit off-line for maintenance. The design filtration rate is 2.0 gpm/sq. ft. The filter system would consist of four rectangular filters, each with approximate dimensions of up to 13-feet by 13-feet. Filter media is proposed to be a combination of anthracite and greensand or silica sand, with a gravel underdrain system. The use of air in the backwashing system reduces the time and water volume required for backwashing. It also improves the cleaning of the media, reducing mud balls and extending media life. A dedicated backwash pump would be used to provide water for backwashing and a dedicated blower would be used to provide air.



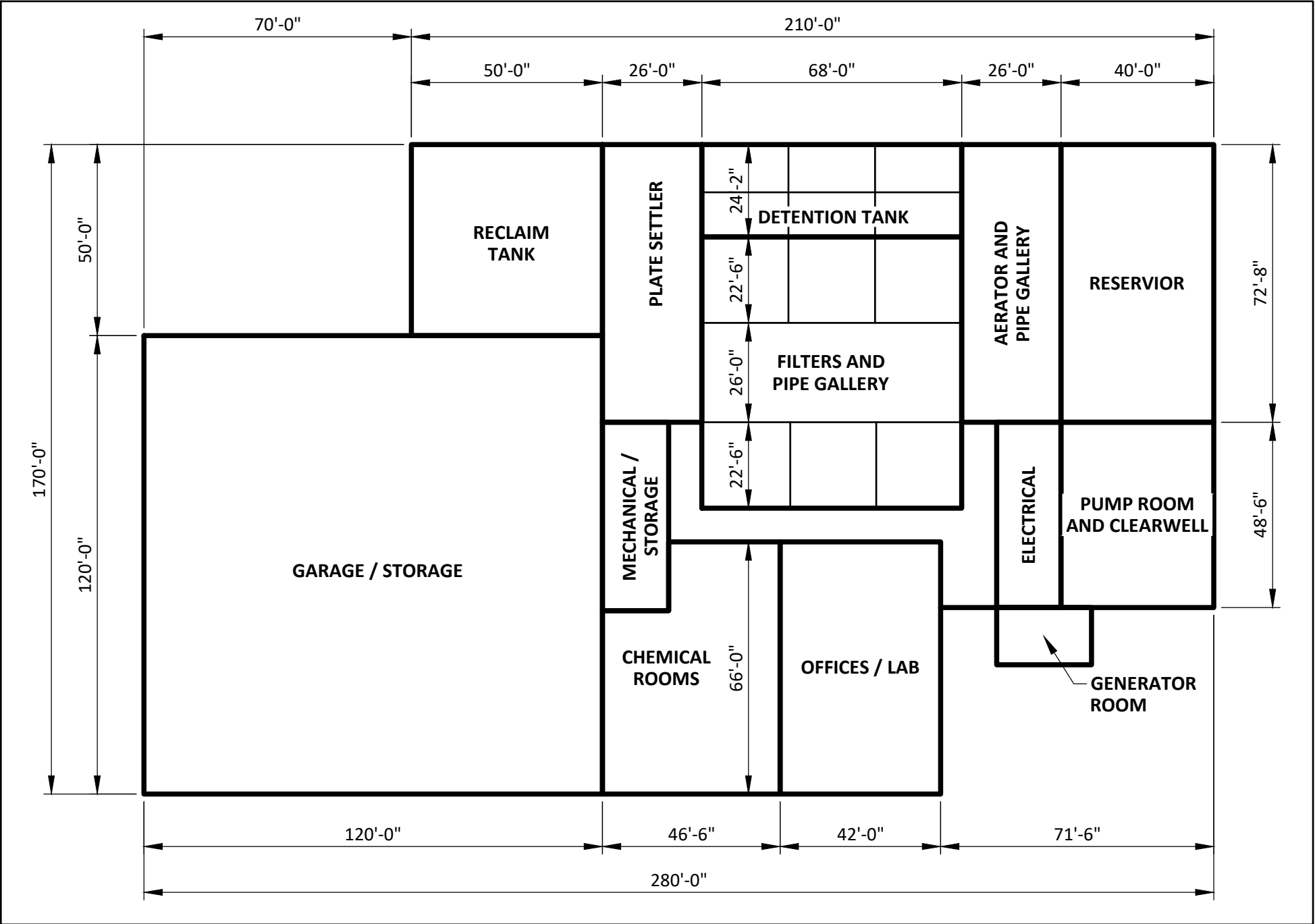
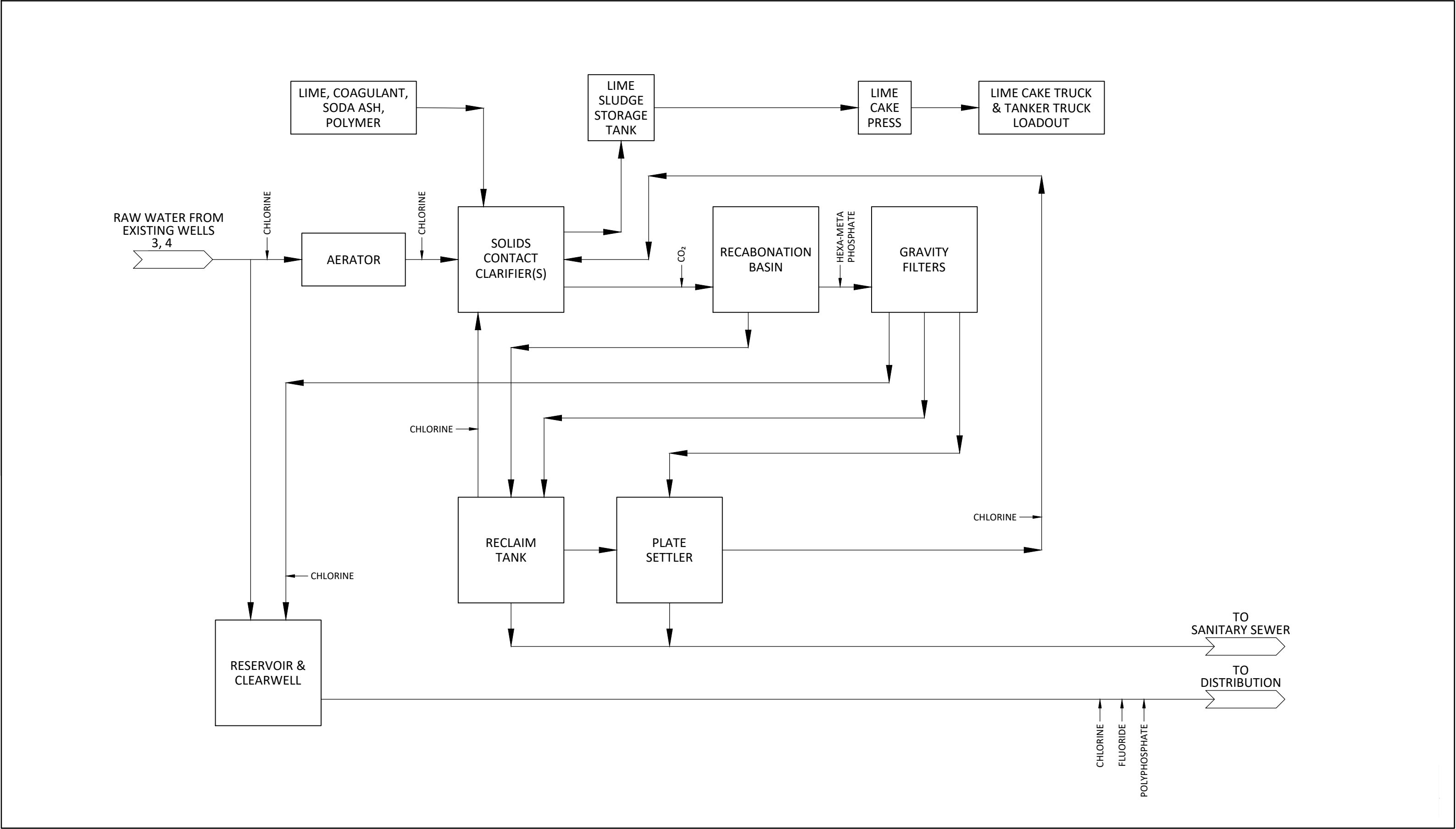
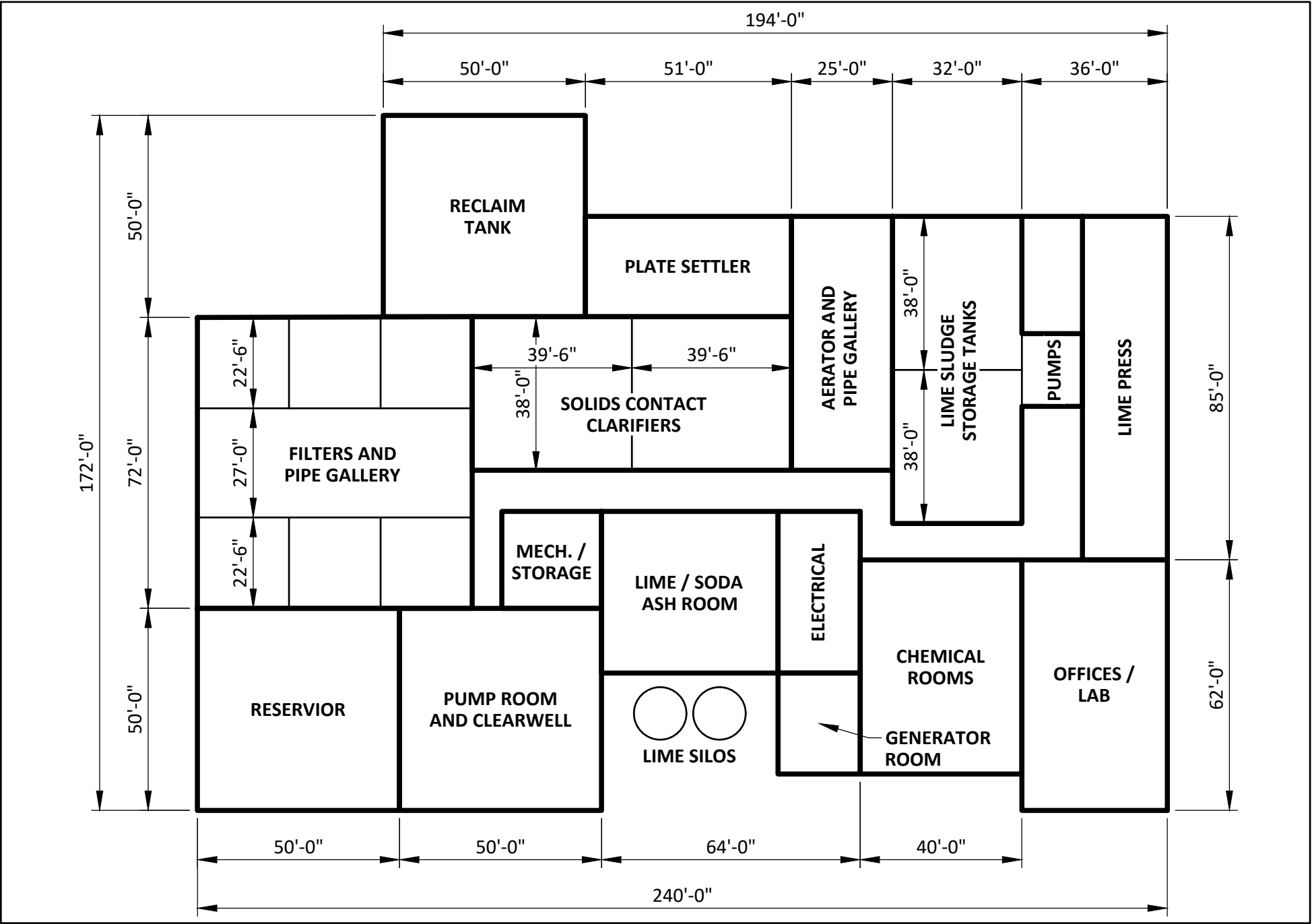
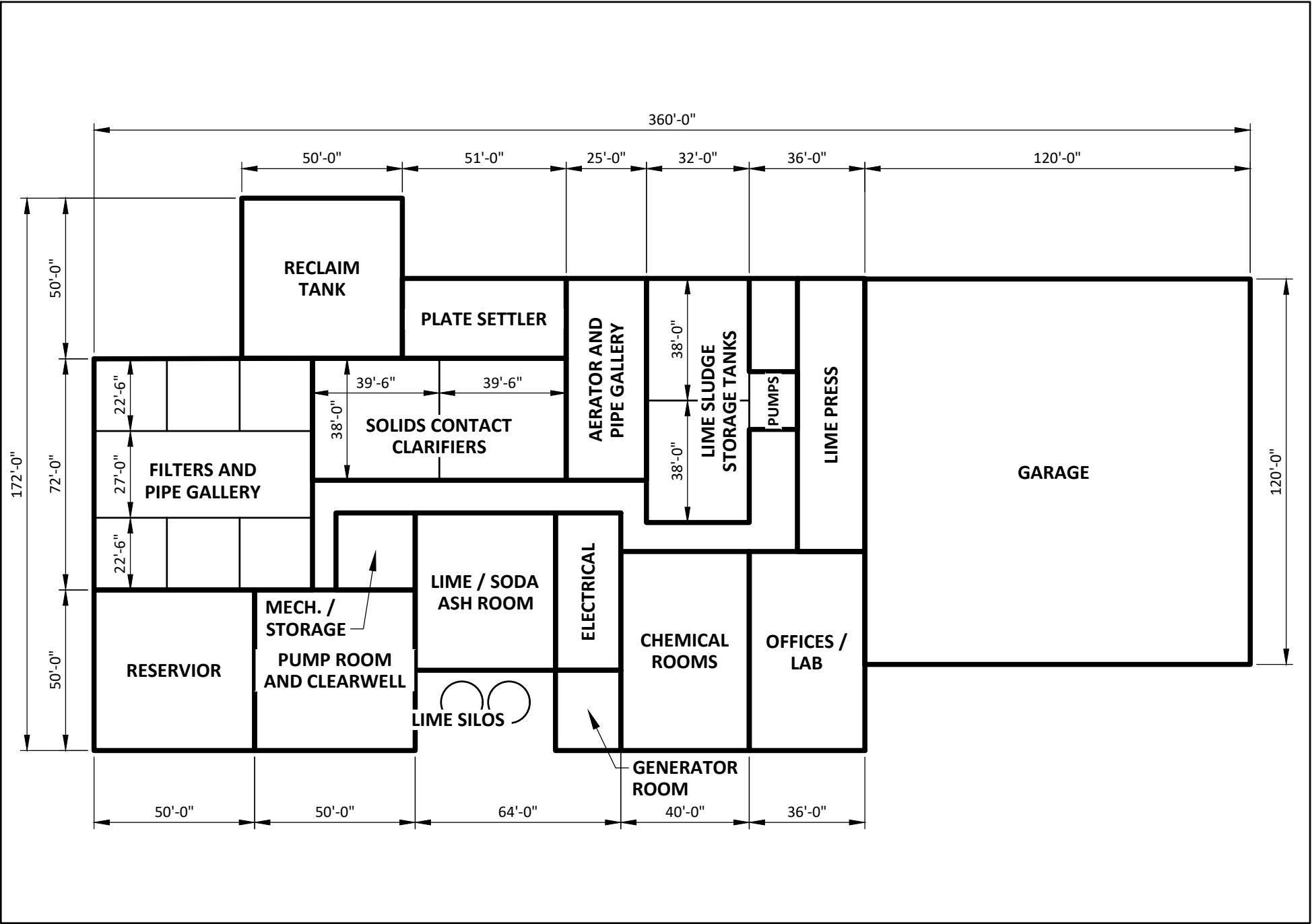


FIGURE 5.5 - GRAVITY FILTRATION AND LIME SOFTENING







Filtered water would gravity flow to a new baffled concrete clearwell (size to be determined). The filtered water will be chlorinated, and new high service pumps would be used to pump water from the clearwell to the distribution system and elevated storage tank. Each pump will be provided with a variable frequency drive for flow adjustment. The clearwell will provide storage for pumping and backwashing.

To minimize the amount of backwash water wasted and discharged, a backwash water plate settler reclamation system would be installed. The system would consist of a steel tank with inclined lamella settling plates to receive backwash water as it is discharged from the filters. Plate settlers increase the amount of water reused from about 85-90 percent, to about 98 percent. After settling, the clarified water is recycled and blended with the incoming raw water. Solids from the bottom of the tank would be discharged to the sanitary sewer.

A new chemical feed area would be incorporated into this alternative. A chemical room would be provided for the potassium permanganate and corrosion inhibitor with room for future chemicals. The softening chemicals would be located in separate dedicated rooms. The fluoride would also be located in a dedicated room, as the fluoride vapors are very corrosive and are isolated to reduce corrosion damage. The chlorination would be stored as required by current building codes. Chlorine will provide disinfection and a residual in the distribution system.

Lime soda ash softening generates a significant amount of sludge. There are two options for disposal: lagoons, or storage and contracting a disposal agency. Lime sludge can be stored in a lagoon and the water allowed to evaporate or infiltrate until a thickened sludge remains. This sludge would need to be dredged from the lagoon every 3 to 5 years and then either land applied or landfilled. Alternately, lime sludge can be stored in dedicated storage tanks (minimum of two) and then dewatered to approximately 60 percent solids and then land applied. A minimum of two presses are proposed for this system to allow for operational flexibility and the ability to press sludge while maintenance is performed on the other press. The dewatered sludge would be discharged into a truck and then land applied. The city would need to find appropriate sites for land application.

A new SCADA control system will be added with the new facility, and any remaining control features will be replaced, and all systems will be integrated to provide for one fully functional system. The system would allow control of the facility from multiple sites and would provide secure communications.

Emergency power will be provided by a new generator onsite.

The facility will be designed with a common office/lab area to allow water sample analysis and record keeping. There will also be an operations control room and a restroom. A garage and work area would be constructed as part of the treatment building to allow the operators a place to park trucks and work on equipment.

3. Construct a New Treatment Facility with Gravity Filtration and Reverse Osmosis

The improvements for this alternative include gravity filtration, followed by plate settling, and reverse osmosis membrane filtration with recovery. With RO, 20 to 25 percent of the raw water pumped is discharged as reject water. The average influent flow to an RO facility would need to be 352,000 gpd for a finished water demand of 281,000 gpd and the maximum flow would need to be approximately 1,403,000 gpd rather than 1,122,000 gpd. The reject water would be roughly 71,000 gallons for an average day use in 2045 with an RO system. The reject water would be wasted to the sanitary sewer and would need to be treated at the WWTF. Depending on location of the new treatment facility, a larger diameter sewer line may be needed to handle the

additional flow from the RO process. The reverse osmosis system is followed by chlorination, and fluoridation.

The process flow for this alternative is shown in Figure 5.8. Figures 5.9 and 5.10 show potential layouts for the new treatment facility. There are multiple layouts to consider, and the building, structure, layout, and sizing would be finalized during the design process and in consultation with the city.

Even with the increased demand from the RO system, the existing wells in combination with future wells are expected to provide sufficient water for current and future demands. The facility would be constructed to enclose the treatment processes and associated equipment and provide room for expansion.

The aerator would be an induced draft aerator constructed of aluminum with PVC internal components and designed for a maximum flow rate of 1,403,000 gpd. Water cascades downward through the aerator, releasing gases in the water, while oxygen is provided from the upward flowing of air which is drawn through the aerator by fans located on top of the structure. This type of aeration provides the most efficient oxidation and gas stripping, providing the greatest treatment flexibility. The water flows from the aerator to the detention basin.

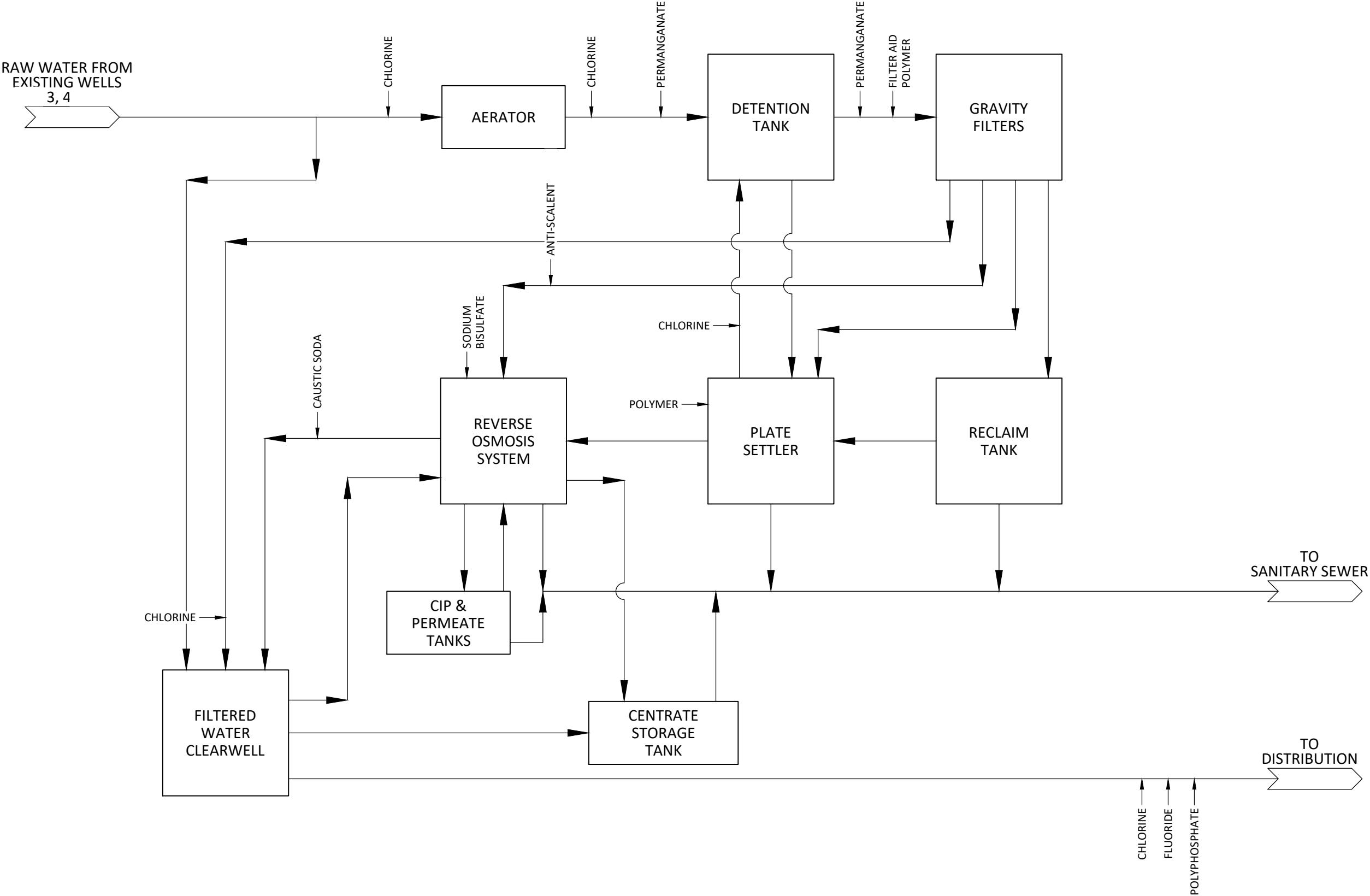
The detention basin allows complete oxidation of the iron and would be sized for 40-minutes of detention time. Detention time provides iron additional time to form floc, resulting in more thorough and efficient filtration.

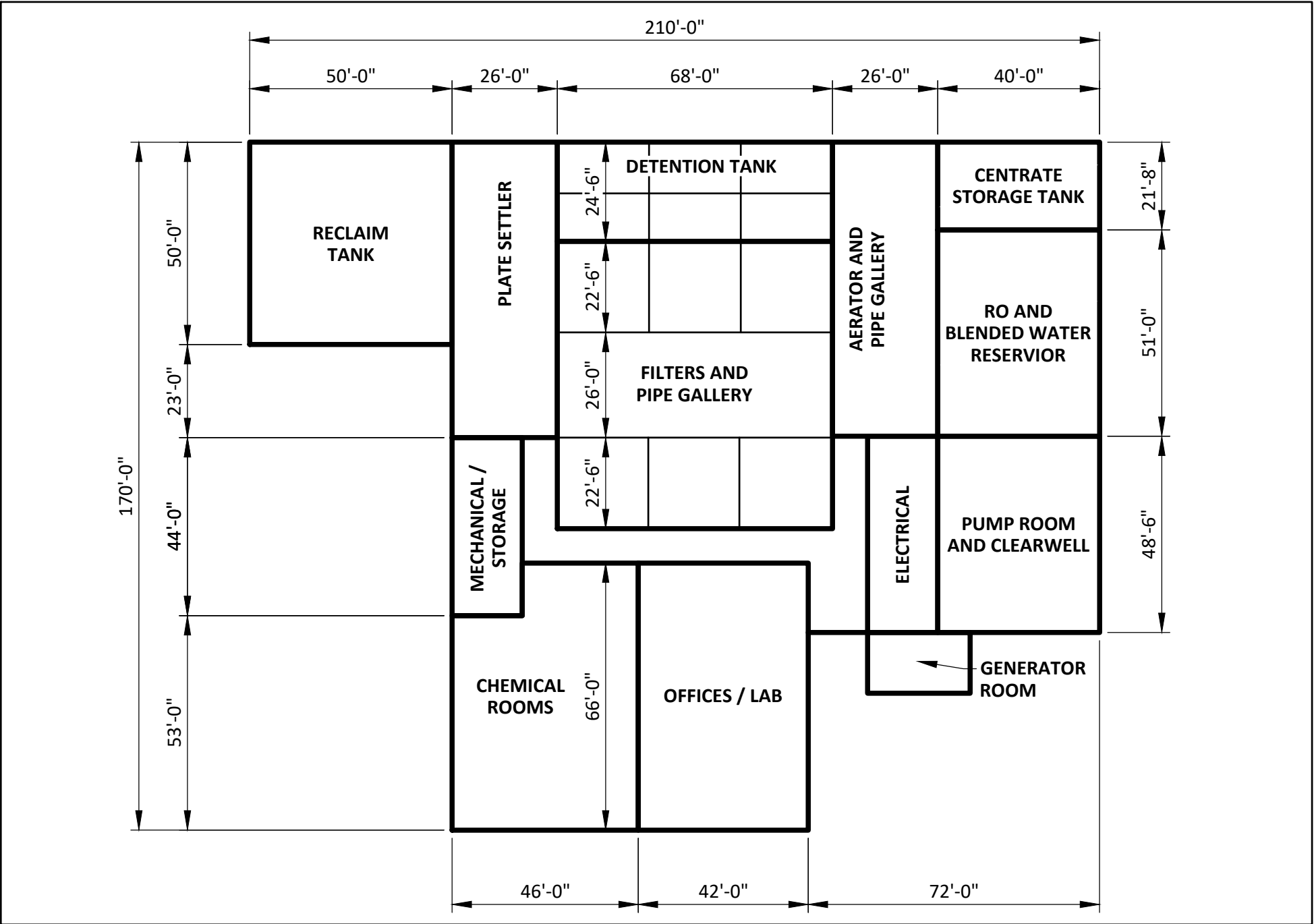
The filters would be sized to treat 1,403,000 gpd of water, total. The filters would again be designed in multiple units to allow taking a unit off-line for maintenance. The design filtration rate is 2.0 gpm/sq. ft. The filter system would consist of four rectangular filters, each with an approximate dimension of up to 14-feet by 14-feet. Filter media is proposed to be a combination of anthracite and greensand or silica sand, with a gravel underdrain system. The underdrain system would be designed to prevent scaling on the surface due to hard water. The backwash system would incorporate both air and water wash. The use of air in the backwashing system reduces the time and water volume required for backwashing. It also improves the cleaning of the media, reducing mud balls and extending media life. A dedicated backwash pump would be used to provide water for backwashing and a dedicated blower would be used to provide air.

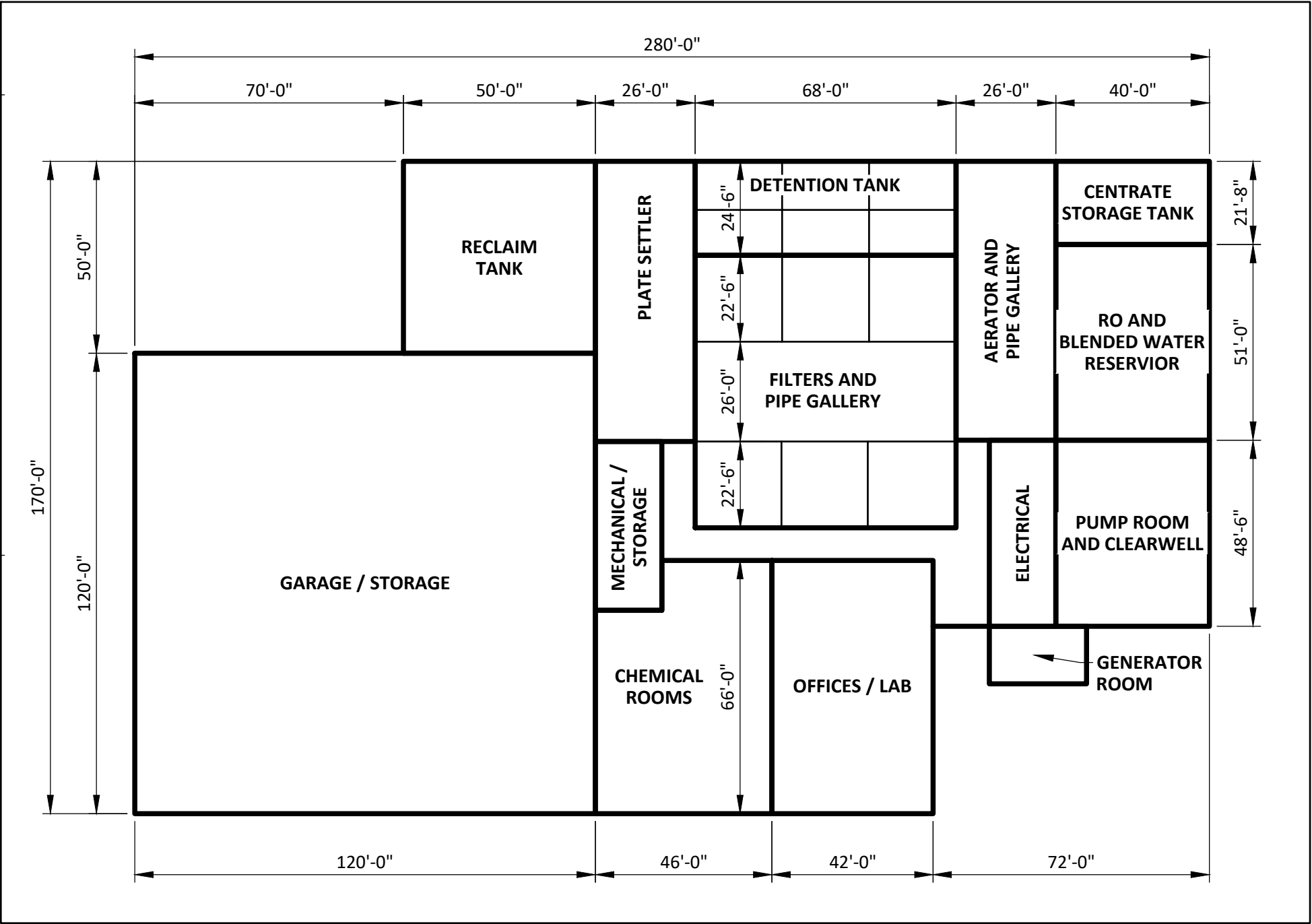
To minimize the amount of backwash water wasted and discharged, a backwash water plate settler reclamation system would be installed. The system would consist of a steel tank with inclined lamella settling plates, as previously described, to receive backwash water as it is discharged from the filters. After settling, the clarified water would be recycled back to the filters to be blended with the raw water. Solids from the bottom of the tank would be discharged to the sanitary sewer.

It is estimated the lamella plate settling process will recover about 98 percent, and the RO process is estimated to have an 80 percent recovery rate of water from the settler. The plate filters and plate settler will provide excellent pre-treatment for the RO system and will likely result in greater membrane longevity. Polymer can be used increase the amount of solids removed by the plate settler.

After gravity filtration and plate settling, the water would flow into the reverse osmosis membrane system. This system would reduce the hardness of the water by approximately 70-75 percent.







Reverse osmosis (RO) treatment uses pressure to drive water through an artificial membrane and effectively remove nearly all contaminants in the water. The membrane divides the water into two parts: the concentrate stream or reject water, and the permeate or product water. The concentrate stream is water and other constituents rejected by the membrane. The permeate stream is the water which has passed through the membrane and is nearly 100 percent pure water. This pure water is extremely soft and corrosive which may cause problems in the distribution system. Corrosion is combated in two ways: the permeate stream is blended with the filter effluent and the final product is treated to a pH adjustment to make it less corrosive. The blending process mixes the permeate stream with 15 to 30 percent of the filter effluent not passed through the RO system. Blending filtered water with the permeate adds a portion of the hardness-causing minerals back into the water, reducing the corrosivity and helping to reduce taste concerns for customers.

The reject stream typically consists of 20 to 25 percent of the water directed through the RO system, or 15 to 25 percent of the total water flow, and is discharged into the sanitary sewer system. The reject stream is highly concentrated; however, almost all the water originally pumped is ultimately discharged to the sanitary sewer system, meaning the final waste stream does not have significantly higher concentration of contaminants than the raw water. Additionally, reverse osmosis removes many impurities and provides added protection for any potential future drinking water standards or well contamination. Reverse osmosis is a time-tested membrane technology which has been used in various communities in Minnesota for these purposes.

The amount of water filtered through the RO process can be chosen based on desired finished water quality and capacity. The RO process would soften the water, remove manganese, and allow the city to treat many additional contaminants.

It is possible the sewer mains may have to be replaced with larger diameter mains, or the facility would need to install its own sewer line. The Howard Lake wastewater treatment facility should also evaluate the impact of additional flow to the facility from the additional water used for RO treatment.

Filtered water would gravity flow to a baffled concrete clearwell (size to be determined). After the filtered water and RO permeate are blended in the blended clearwell, the water will be chlorinated, and new high service pumps would be used to pump water from the clearwell to the distribution system and elevated storage tank. Each pump will be provided with a variable frequency drive for flow adjustment. The clearwell will provide storage for pumping and backwashing.

A chemical feed area would be incorporated into this alternative. Chemical feed systems will include permanganate, sodium bisulfate, antiscalant, chlorine, fluoride, and potentially polymer. Sodium bisulfate will be provided for cleaning RO membranes and antiscalant for preventing scale build-up on the membranes during and between treatment. Chlorine will provide disinfection and a residual in the distribution system.

A new SCADA control system will be added with the new treatment facility, any remaining control features will be replaced, and all systems will be integrated to provide for one fully functional system. The system would allow control of the facility from multiple sites and would provide secure communications.

Emergency power will be provided by a new generator onsite.

The facility will be designed with a common office/lab area to allow water sample analysis and record keeping. There will also be an operations control room and a restroom. A garage and work area could be constructed as part of the treatment building

to allow the operators a place to park trucks and work on equipment.

D. Future Capital Improvement Items

In addition to the recommended treatment improvements described in the various alternatives, there are also some recommended capital improvement projects the City of Howard Lake should consider keeping or adding on the capital improvement plan during the design period.

1. Construct new water storage structure(s) so demand and fire flow requirements are no less than finished water storage capacity. As mentioned previously, the city should replace the 75,000 gallon elevated storage tower with a new 250,000 gallon elevated storage tower. The old tower is past its design life and a new tower would provide additional storage, help the city meet its increasing demand, and provide adequate water pressure. A clearwell is another storage option. Clearwells are very economical and are very easy to maintain. This can be accomplished by adding on a concrete clearwell to any of the options outlined earlier in this report.
2. The city will need another supply well to meet its expected 20-year demand.
3. As the city continues to expand and grow, additional distribution system improvements are needed, such as trunk watermain and the addition of new booster stations. The timing for the watermain extensions and booster stations all depend on timing for growth and expansion of the city. These improvements will be dictated by future growth.

VI. STAFFING REVIEW AND ANALYSIS

This section will look at the existing staffing and evaluate needs for future staffing based on which treatment facility is constructed. It is anticipated that each staff member will spend 20 hours/week at the facility.

The current staffing for the water system is led by the water plant operator. Assuming a new gravity filtration water treatment facility is constructed (Alternative 1 – Iron and Manganese removal), it is suggested that the city hires an additional staff member for a total of two utilities operators.

If Alternative 3, Reverse Osmosis, is selected, one staff operator is recommended in addition to the two needed for Alternative 1. A total of three operators is advised due to the additional operation and maintenance for the reverse osmosis membranes, chemical feed, and associated equipment.

For Alternative 2, the lime softening plant, two staff members are recommended in addition to the two needed for Alternative 1, thereby requiring four staff total. A lime softening plant will require additional labor to handle the lime feed and equipment and disposal of the solids waste product.

A summary of the total staffing requirements for each option are noted below:

- Gravity Filtration – 
- Lime Softening with Gravity Filtration – 
- Gravity Filtration with Reverse Osmosis – 

When a new treatment facility is constructed, it is suggested to move the Utilities staff to the new facility to centralize operations. This would require adequate office space to be included at the new facility.

VII. RECOMMENDATIONS AND CONCLUSIONS

A. Treatment Alternatives Evaluation Discussion

All three alternatives described in Section VI will provide quality water for the City of Howard Lake and its customers.

Alternatives 2 and 3 will provide the best-improved water quality over the existing process and reduce the high levels of manganese and hardness in the raw groundwater. Residents and businesses which currently use point-of-use water softening systems will be able to reduce or eliminate softener usage. This can result in reduced chloride discharge in wastewater.

Table 7.1 - Decision Matrix			
Item	Primary Treatment (Removal)		
	Gravity Filtration	Lime and Soda Ash Softening with Filtration	Gravity Filtration and Reverse Osmosis (RO)
Ability to Meet Water Quality Goals	Good	Excellent	Excellent
Expandability Potential	Excellent	Excellent	Excellent
Ability to Meet Future Average and Peak Demand	Excellent	Excellent	Excellent
Ease of Operation	Excellent	Okay	Okay

Table 7.2 – Project Cost			
Item	Option 1 Gravity Filtration	Option 2 Lime and Soda Ash and Filtration	Option 3 Filtration and RO
WTF Cost	\$8,000,000	\$14,000,000	\$8,800,000
Garage	\$50,000	\$50,000	\$50,000
New Water Supply	\$500,000	\$500,000	\$500,000
New Water Tower	\$2,000,000	\$2,000,000	\$2,000,000
Added Site Work, Land Costs, etc.	\$50,000	\$50,000	\$50,000
Total Construction Cost	\$10,600,000	\$16,600,000	\$11,400,000
Legal/Administration/Engineering Costs (25%)	\$2,650,000	\$4,150,000	\$2,850,000
Total Project Cost	\$13,250,000	\$20,750,000	\$14,250,000
Project Range (+/-15%)	\$11.3M - \$15.3M	\$17.6M - \$23.9M	\$12.1 M - \$16.4M
Estimated Annual OM&R Cost	\$215,000	\$300,000	\$275,000

B. Alternative Recommendation

Any of the three options will achieve lower manganese concentrations and comply with the current health recommendations. Alternatives 2 and 3 have the added benefit of softening the water. Alternative 2 wastes the least amount of water, however, solids from the lime treatment system must be disposed of via land application or landfill. Alternative 3 does utilize the most water, however, reverse osmosis does remove many impurities and provides added protection for any potential future drinking water standards or well contamination.

A gravity filter plant can be designed to allow for future addition of lime softening or RO treatment. However, to do this, the city would need to select a softening option before construction to allow for the most efficient initial design of the facility for future expansions.

C. User Rate Analysis

One way to structure user water utility rates is to include a monthly service charge on top of a consumer's usage rate. The monthly service charge does not include any water use and is intended to pay for the portions of the system costs which are required no matter how much water is produced. These costs include the distribution system, overhead and administration expenses, loan payments, some maintenance and repair costs, and some utilities. The usage rate is charged to the customer for any amount of water usage and is intended to pay for the system costs which vary depending on demand. These variable costs include chemical costs, some maintenance and repair costs, and some utilities. Often, municipalities will have different rates for residential customers, commercial customers, and industrial customers.

The existing rate system for Howard Lake is structured this way. Single family residential rates get a monthly meter flat base charge of \$26.88, and additional charges based on quantity of water used. The other water service classes are charged with the same structure, a monthly flat base charge with pay per volume used. Additional funding will be pursued to avoid user rate increases.

D. Financing Options

There are several funding options Howard Lake can explore to help finance these improvements. A brief review of these options can be found in this section.

1. Bonding

Howard Lake could sell general obligation bonds, local improvement, or revenue bonds to raise the capital costs to fund the proposed project. The proceeds of the bonds would need to be repaid through property taxes, assessments, or user charges to the system.

2. Drinking Water Revolving Fund (DWRF) Loans

The Clean Water Revolving Fund (CWRF) is a loan program operated by the State of Minnesota which was created under the Clean Water Act. This fund is intended to help communities build or upgrade water infrastructure. The program is not meant to fund new development and will only fund the part of the treatment facility for existing users.

The Drinking Water State Revolving Fund (DWSRF) is a loan program operated by the State of Minnesota which was created under the Clean Water Act. Minnesota's revolving loan program provides below market rate loans to public water system improvements. The Minnesota MN Department of Health (MDH) administers the environmental and permitting aspects of a project to prepare it for financing, while the MN Public Funding Authority (PFA) provides and administers the financial aspects of the loan review and disbursements. Funds are provided from sources including US EPA, state matching funds, loan repayments, and the PFA revenue bond proceeds. To be eligible for funding, Howard Lake must submit a proposal to be put on the Project

Priority List (PPL). The project funding priority is ranked based on different categories including public health, adequate water supply, and financial need. A project must be listed on the PPL to be eligible for a loan through the DWSRF. A city must then submit a Preliminary Engineering Report (PER) to the MDH for approval, complete an Intended Use Plan (IUP) application to request inclusion on the quarterly IUP list, and also submit an Environmental Review Checklist for environmental review. Once an application is on the list, the city is eligible to apply for an DWSRF construction loan.

The standard loan term for all applicants is a 20-year loan period at a low-interest rate. Interest rates have currently been around 1.08 percent but vary based on the current market. The DWSRF also offers extended loan terms of 30 years, with different interest rates based on the financial need of the community. A loan secured through the DWSRF program may be repaid through local property tax rates, user fees, or assessments.

3. USDA Rural Development Loan or Grant

Howard Lake may be eligible to secure a loan or grant through the USDA Office of Rural Development to help finance water and wastewater system improvements. Repayment could be through an increase in local property tax rates, user fees, or assessments. A portion of the project costs may be eligible for grant funding as part of this program, depending on the city customers' economic status. Based on the initial analysis, the recommended alternative would likely cause user rates which are considered affordable by USDA RD and are not likely to allow the project to be eligible for some grant funding.

To be considered for Rural Development monies, a Preliminary Engineering Report (PER) and Environmental Report (ER) must be completed and submitted to RD for their review and approval. Upon approval, RD would allocate a low-interest, fixed-rate loan and/or grant to be used to help finance the project. Loan rates are typically a low fixed-rate interest for up to 40-year terms. Depending on economic status, grants may be available for up to 49 percent of the project cost.

Rural Development uses an Equivalent Dwelling Unit (EDU) calculation for assisting in determining the amount and type of funding for which a community is eligible. Although a 40-year loan term is favorable from an annual cost basis, water treatment facilities typically require a significant upgrade after 20 years. Since the facility is designed for shorter than the loan term loan, it is generally not advisable to consider paying for water treatment facilities with this method (i.e., The city might be in perpetual debt for the WTF).

The construction phasing of the project will depend on what the city decides to do. All the alternatives will have similar construction staging where the new buildings and equipment are installed. Some phasing will be needed as wells are converted to pumping to the new treatment facility instead of directly to the system. However, this phasing should result in minimal impact to existing users and allow the system to still meet all water demands.

This section will be finalized after the city chooses how to proceed.

E. Implementation

The implementation schedule for a WTF construction project will depend on how the city chooses to proceed. A sample implementation schedule is shown in Table 7.3, and this shows the fastest schedule to move forward with water treatment improvements. This schedule will be updated as the city moves through this process. Next steps would include meeting with the City Council, conducting some type of public engagement process, another meeting with city Council and then final adoption of the report.

Table 7.3 - Sample Implementation Schedule	
Task	Month #
Initiate Preliminary Design	0
Initiate Final Design	6
Submit Plans/Specs to MDH	10
Council Approval of Plans and Specs for Bidding	14
Advertisement for Bids	15
Bid Project	16
Award Contract	17
Start Construction	18
Project Completion	36
Note: Month which each activity is shown to occur is approximate	

Appendix A: Raw Water Quality

Howard Lake 2020 Drinking Water Report

Making Safe Drinking Water

Your drinking water comes from a groundwater source: two wells ranging from 131 to 148 feet deep, that draw water from the Quaternary Buried Artesian aquifer.

Howard Lake works hard to provide you with safe and reliable drinking water that meets federal and state water quality requirements. The purpose of this report is to provide you with information on your drinking water and how to protect our precious water resources.

Contact Troy Zwilling, Public Works, at 13205832332 or tlzwillig@yahoo.com if you have questions about Howard Lake's drinking water. You can also ask for information about how you can take part in decisions that may affect water quality.

The U.S. Environmental Protection Agency sets safe drinking water standards. These standards limit the amounts of specific contaminants allowed in drinking water. This ensures that tap water is safe to drink for most people. The U.S. Food and Drug Administration regulates the amount of certain contaminants in bottled water. Bottled water must provide the same public health protection as public tap water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Howard Lake Monitoring Results

This report contains our monitoring results from January 1 to December 31, 2020.

We work with the Minnesota Department of Health to test drinking water for more than 100 contaminants. It is not unusual to detect contaminants in small amounts. No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health.

Learn more by visiting the Minnesota Department of Health's webpage [Basics of Monitoring and testing of Drinking Water in Minnesota](https://www.health.state.mn.us/communities/environment/water/factsheet/sampling.html) (<https://www.health.state.mn.us/communities/environment/water/factsheet/sampling.html>).

How to Read the Water Quality Data Tables

The tables below show the contaminants we found last year or the most recent time we sampled for that contaminant. They also show the levels of those contaminants and the Environmental Protection Agency's limits. Substances that we tested for but did not find are not included in the tables.

We sample for some contaminants less than once a year because their levels in water are not expected to change from year to year. If we found any of these contaminants the last time we sampled for them, we included them in the tables below with the detection date.

We may have done additional monitoring for contaminants that are not included in the Safe Drinking Water Act. To request a copy of these results, call the Minnesota Department of Health at 651-201-4700 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

Some contaminants are monitored regularly throughout the year, and rolling (or moving) annual averages are used to manage compliance. Because of this averaging, there are times where the Range of Detected Test Results for the calendar year is lower than the Highest Average or Highest Single Test Result, because it occurred in the previous calendar year.

Definitions

- **AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **EPA:** Environmental Protection Agency
- **MCL (Maximum contaminant level):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **MCLG (Maximum contaminant level goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **MRDL (Maximum residual disinfectant level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG (Maximum residual disinfectant level goal):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **N/A (Not applicable):** Does not apply.
- **ppb (parts per billion):** One part per billion in water is like one drop in one billion drops of water, or about one drop in a swimming pool. ppb is the same as micrograms per liter ($\mu\text{g}/\text{l}$).
- **ppm (parts per million):** One part per million is like one drop in one million drops of water, or about one cup in a swimming pool. ppm is the same as milligrams per liter (mg/l).
- **PWSID:** Public water system identification.

Monitoring Results – Regulated Substances

LEAD AND COPPER – Tested at customer taps.

Contaminant (Date, if sampled in previous year)	EPA's Ideal Goal (MCLG)	EPA's Action Level	90% of Results Were Less Than	Number of Homes with High Levels	Violation	Typical Sources
Lead (12/03/18)	0 ppb	90% of homes less than 15 ppb	<2 ppb	0 out of 10	NO	Corrosion of household plumbing.
Copper (12/03/18)	0 ppm	90% of homes less than 1.3 ppm	1.12 ppm	0 out of 10	NO	Corrosion of household plumbing.

INORGANIC & ORGANIC CONTAMINANTS – Tested in drinking water.

Contaminant (Date, if sampled in previous year)	EPA's Ideal Goal (MCLG)	EPA's Limit (MCL)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
Nitrate	10 ppm	10.4 ppm	0.19 ppm	N/A	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Arsenic	0 ppb	10.4 ppb	6.81 ppb	N/A	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.

Potential Health Effects and Corrective Actions (If Applicable)

Arsenic: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer

in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

CONTAMINANTS RELATED TO DISINFECTION – Tested in drinking water.

Substance (Date, if sampled in previous year)	EPA's Ideal Goal (MCLG or MRDLG)	EPA's Limit (MCL or MRDL)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
Total Trihalomethanes (TTHMs)	N/A	80 ppb	0.6 ppb	N/A	NO	By-product of drinking water disinfection.
Total Chlorine	4.0 ppm	4.0 ppm	0.98 ppm	0.45 - 1.32 ppm	NO	Water additive used to control microbes.

OTHER SUBSTANCES – Tested in drinking water.

Substance (Date, if sampled in previous year)	EPA's Ideal Goal (MCLG)	EPA's Limit (MCL)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
Fluoride	4.0 ppm	4.0 ppm	1.02 ppm	0.81 - 1.00 ppm	NO	Erosion of natural deposits; Water additive to promote strong teeth.

Some People Are More Vulnerable to Contaminants in Drinking Water

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. The developing fetus and therefore pregnant women may also be more vulnerable to contaminants in drinking water. These people or their caregivers should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Learn More about Your Drinking Water

Drinking Water Sources

Minnesota's primary drinking water sources are groundwater and surface water. Groundwater is the water found in aquifers beneath the surface of the land. Groundwater supplies 75 percent of Minnesota's drinking water. Surface water is the water in lakes, rivers, and streams above the surface of the land. Surface water supplies 25 percent of Minnesota's drinking water.

Contaminants can get in drinking water sources from the natural environment and from people's daily activities. There are five main types of contaminants in drinking water sources.

- **Microbial contaminants**, such as viruses, bacteria, and parasites. Sources include sewage treatment plants, septic systems, agricultural livestock operations, pets, and wildlife.
- **Inorganic contaminants** include salts and metals from natural sources (e.g. rock and soil), oil and gas production, mining and farming operations, urban stormwater runoff, and wastewater discharges.
- **Pesticides and herbicides** are chemicals used to reduce or kill unwanted plants and pests. Sources include agriculture, urban stormwater runoff, and commercial and residential properties.
- **Organic chemical contaminants** include synthetic and volatile organic compounds. Sources include industrial processes and petroleum production, gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants** such as radium, thorium, and uranium isotopes come from natural sources (e.g. radon gas from soils and rock), mining operations, and oil and gas production.

The Minnesota Department of Health provides information about your drinking water source(s) in a source water assessment, including:

- How Howard Lake is protecting your drinking water source(s);
- Nearby threats to your drinking water sources;
- How easily water and pollution can move from the surface of the land into drinking water sources, based on natural geology and the way wells are constructed.

Find your source water assessment at [Source Water Assessments](https://www.health.state.mn.us/communities/environment/water/swp/swa) (<https://www.health.state.mn.us/communities/environment/water/swp/swa>) or call 651-201-4700 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

Lead in Drinking Water

You may be in contact with lead through paint, water, dust, soil, food, hobbies, or your job. Coming in contact with lead can cause serious health problems for everyone. There is no safe level of lead. Babies, children under six years, and pregnant women are at the highest risk.

Lead is rarely in a drinking water source, but it can get in your drinking water as it passes through lead service lines and your household plumbing system. Howard Lake is responsible for providing high quality drinking water, but it cannot control the plumbing materials used in private buildings.

Read below to learn how you can protect yourself from lead in drinking water.

1. **Let the water run** for 30-60 seconds before using it for drinking or cooking if the water has not been turned on in over six hours. If you have a lead service line, you may need to let the water run longer. A service line is the underground pipe that brings water from the main water pipe under the street to your home.
 - You can find out if you have a lead service line by contacting your public water system, or you can check by following the steps at: <https://www.mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home>
 - The only way to know if lead has been reduced by letting it run is to check with a test. If letting the water run does not reduce lead, consider other options to reduce your exposure.
2. **Use cold water** for drinking, making food, and making baby formula. Hot water releases more lead from pipes than cold water.
3. **Test your water.** In most cases, letting the water run and using cold water for drinking and cooking should keep lead levels low in your drinking water. If you are still concerned about lead, arrange with a laboratory to test your tap water. Testing your water is important if young children or pregnant women drink your tap water.
 - Contact a Minnesota Department of Health accredited laboratory to get a sample container and instructions on how to submit a sample:
[Environmental Laboratory Accreditation Program](https://elabo.web.health.state.mn.us/public/accreditedlabs/labsearch.seam)
<https://elabo.web.health.state.mn.us/public/accreditedlabs/labsearch.seam>
 The Minnesota Department of Health can help you understand your test results.
4. **Treat your water** if a test shows your water has high levels of lead after you let the water run.
 - Read about water treatment units:
[Point-of-Use Water Treatment Units for Lead Reduction](https://www.health.state.mn.us/communities/environment/water/factsheet/poulead.html)
<https://www.health.state.mn.us/communities/environment/water/factsheet/poulead.html>

Learn more:

- Visit [Lead in Drinking Water](https://www.health.state.mn.us/communities/environment/water/contaminants/lead.html)
<https://www.health.state.mn.us/communities/environment/water/contaminants/lead.html>
- Visit [Basic Information about Lead in Drinking Water](http://www.epa.gov/safewater/lead) (<http://www.epa.gov/safewater/lead>)
- Call the EPA Safe Drinking Water Hotline at 1-800-426-4791. To learn about how to reduce your contact with lead from sources other than your drinking water, visit [Lead Poisoning Prevention: Common Sources](https://www.health.state.mn.us/communities/environment/lead/sources.html) (<https://www.health.state.mn.us/communities/environment/lead/sources.html>).

Appendix B: National Primary and Secondary Drinking Water Regulations Summary

National Primary Drinking Water Regulations



Contaminant	MCL or TT ¹ (mg/L) ²	Potential health effects from long-term ³ exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) ²
 Acrylamide	TT ⁴	Nervous system or blood problems; increased risk of cancer	Added to water during sewage/wastewater treatment	zero
 Alachlor	0.002	Eye, liver, kidney, or spleen problems; anemia; increased risk of cancer	Runoff from herbicide used on row crops	zero
 Alpha/photon emitters	15 picocuries per Liter (pCi/L)	Increased risk of cancer	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	zero
 Antimony	0.006	Increase in blood cholesterol; decrease in blood sugar	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	0.006
 Arsenic	0.010	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production wastes	0
 Asbestos (fibers >10 micrometers)	7 million fibers per Liter (MFL)	Increased risk of developing benign intestinal polyps	Decay of asbestos cement in water mains; erosion of natural deposits	7 MFL
 Atrazine	0.003	Cardiovascular system or reproductive problems	Runoff from herbicide used on row crops	0.003
 Barium	2	Increase in blood pressure	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	2
 Benzene	0.005	Anemia; decrease in blood platelets; increased risk of cancer	Discharge from factories; leaching from gas storage tanks and landfills	zero
 Benzo(a)pyrene (PAHs)	0.0002	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines	zero
 Beryllium	0.004	Intestinal lesions	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	0.004
 Beta photon emitters	4 millirems per year	Increased risk of cancer	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation	zero
 Bromate	0.010	Increased risk of cancer	Byproduct of drinking water disinfection	zero
 Cadmium	0.005	Kidney damage	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	0.005
 Carbofuran	0.04	Problems with blood, nervous system, or reproductive system	Leaching of soil fumigant used on rice and alfalfa	0.04

LEGEND



DISINFECTANT



DISINFECTION
BYPRODUCT



INORGANIC
CHEMICAL



MICROORGANISM



ORGANIC
CHEMICAL



RADIONUCLIDES

Contaminant	MCL or TT ¹ (mg/L) ²	Potential health effects from long-term ³ exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) ²
 Carbon tetrachloride	0.005	Liver problems; increased risk of cancer	Discharge from chemical plants and other industrial activities	zero
 Chloramines (as Cl ₂)	MRDL=4.0 ¹	Eye/nose irritation; stomach discomfort; anemia	Water additive used to control microbes	MRDLG=4¹
 Chlordane	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide	zero
 Chlorine (as Cl ₂)	MRDL=4.0 ¹	Eye/nose irritation; stomach discomfort	Water additive used to control microbes	MRDLG=4¹
 Chlorine dioxide (as ClO ₂)	MRDL=0.8 ¹	Anemia; infants, young children, and fetuses of pregnant women: nervous system effects	Water additive used to control microbes	MRDLG=0.8¹
 Chlorite	1.0	Anemia; infants, young children, and fetuses of pregnant women: nervous system effects	Byproduct of drinking water disinfection	0.8
 Chlorobenzene	0.1	Liver or kidney problems	Discharge from chemical and agricultural chemical factories	0.1
 Chromium (total)	0.1	Allergic dermatitis	Discharge from steel and pulp mills; erosion of natural deposits	0.1
 Copper	TT ⁵ ; Action Level=1.3	Short-term exposure: Gastrointestinal distress. Long-term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits	1.3
 <i>Cryptosporidium</i>	TT ⁷	Short-term exposure: Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
 Cyanide (as free cyanide)	0.2	Nerve damage or thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	0.2
 2,4-D	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops	0.07
 Dalapon	0.2	Minor kidney changes	Runoff from herbicide used on rights of way	0.2
 1,2-Dibromo-3-chloropropane (DBCP)	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	zero
 o-Dichlorobenzene	0.6	Liver, kidney, or circulatory system problems	Discharge from industrial chemical factories	0.6
 p-Dichlorobenzene	0.075	Anemia; liver, kidney, or spleen damage; changes in blood	Discharge from industrial chemical factories	0.075
 1,2-Dichloroethane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero

LEGEND



DISINFECTANT

DISINFECTION
BYPRODUCTINORGANIC
CHEMICAL

MICROORGANISM

ORGANIC
CHEMICAL

RADIONUCLIDES

Contaminant	MCL or TT ¹ (mg/L) ²	Potential health effects from long-term ³ exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) ²
 1,1-Dichloroethylene	0.007	Liver problems	Discharge from industrial chemical factories	0.007
 cis-1,2-Dichloroethylene	0.07	Liver problems	Discharge from industrial chemical factories	0.07
 trans-1,2-Dichloroethylene	0.1	Liver problems	Discharge from industrial chemical factories	0.1
 Dichloromethane	0.005	Liver problems; increased risk of cancer	Discharge from industrial chemical factories	zero
 1,2-Dichloropropane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero
 Di(2-ethylhexyl) adipate	0.4	Weight loss, liver problems, or possible reproductive difficulties	Discharge from chemical factories	0.4
 Di(2-ethylhexyl) phthalate	0.006	Reproductive difficulties; liver problems; increased risk of cancer	Discharge from rubber and chemical factories	zero
 Dinoseb	0.007	Reproductive difficulties	Runoff from herbicide used on soybeans and vegetables	0.007
 Dioxin (2,3,7,8-TCDD)	0.00000003	Reproductive difficulties; increased risk of cancer	Emissions from waste incineration and other combustion; discharge from chemical factories	zero
 Diquat	0.02	Cataracts	Runoff from herbicide use	0.02
 Endothall	0.1	Stomach and intestinal problems	Runoff from herbicide use	0.1
 Endrin	0.002	Liver problems	Residue of banned insecticide	0.002
 Epichlorohydrin	TT ⁴	Increased cancer risk; stomach problems	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	zero
 Ethylbenzene	0.7	Liver or kidney problems	Discharge from petroleum refineries	0.7
 Ethylene dibromide	0.00005	Problems with liver, stomach, reproductive system, or kidneys; increased risk of cancer	Discharge from petroleum refineries	zero
 Fecal coliform and <i>E. coli</i>	MCL ⁶	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes may cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.	Human and animal fecal waste	zero⁶

LEGEND



DISINFECTANT

DISINFECTION
BYPRODUCTINORGANIC
CHEMICAL

MICROORGANISM

ORGANIC
CHEMICAL

RADIONUCLIDES

Contaminant	MCL or TT ¹ (mg/L) ²	Potential health effects from long-term ³ exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) ²
 Fluoride	4.0	Bone disease (pain and tenderness of the bones); children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	4.0
 <i>Giardia lamblia</i>	TT ⁷	Short-term exposure: Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
 Glyphosate	0.7	Kidney problems; reproductive difficulties	Runoff from herbicide use	0.7
 Haloacetic acids (HAA5)	0.060	Increased risk of cancer	Byproduct of drinking water disinfection	n/a⁹
 Heptachlor	0.0004	Liver damage; increased risk of cancer	Residue of banned termiticide	zero
 Heptachlor epoxide	0.0002	Liver damage; increased risk of cancer	Breakdown of heptachlor	zero
 Heterotrophic plate count (HPC)	TT ⁷	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water. The lower the concentration of bacteria in drinking water, the better maintained the water system is.	HPC measures a range of bacteria that are naturally present in the environment	n/a
 Hexachlorobenzene	0.001	Liver or kidney problems; reproductive difficulties; increased risk of cancer	Discharge from metal refineries and agricultural chemical factories	zero
 Hexachloro-cyclopentadiene	0.05	Kidney or stomach problems	Discharge from chemical factories	0.05
 Lead	TT ⁵ ; Action Level=0.015	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities; Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits	zero
 <i>Legionella</i>	TT ⁷	Legionnaire's Disease, a type of pneumonia	Found naturally in water; multiplies in heating systems	zero
 Lindane	0.0002	Liver or kidney problems	Runoff/leaching from insecticide used on cattle, lumber, and gardens	0.0002
 Mercury (inorganic)	0.002	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands	0.002
 Methoxychlor	0.04	Reproductive difficulties	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, and livestock	0.04
 Nitrate (measured as Nitrogen)	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	10

LEGEND



DISINFECTANT

DISINFECTION
BYPRODUCTINORGANIC
CHEMICAL

MICROORGANISM

ORGANIC
CHEMICAL

RADIONUCLIDES

Contaminant	MCL or TT ¹ (mg/L) ²	Potential health effects from long-term ³ exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) ²
 Nitrite (measured as Nitrogen)	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	1
 Oxamyl (Vydate)	0.2	Slight nervous system effects	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes	0.2
 Pentachlorophenol	0.001	Liver or kidney problems; increased cancer risk	Discharge from wood-preserving factories	zero
 Picloram	0.5	Liver problems	Herbicide runoff	0.5
 Polychlorinated biphenyls (PCBs)	0.0005	Skin changes; thymus gland problems; immune deficiencies; reproductive or nervous system difficulties; increased risk of cancer	Runoff from landfills; discharge of waste chemicals	zero
 Radium 226 and Radium 228 (combined)	5 pCi/L	Increased risk of cancer	Erosion of natural deposits	zero
 Selenium	0.05	Hair or fingernail loss; numbness in fingers or toes; circulatory problems	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	0.05
 Simazine	0.004	Problems with blood	Herbicide runoff	0.004
 Styrene	0.1	Liver, kidney, or circulatory system problems	Discharge from rubber and plastic factories; leaching from landfills	0.1
 Tetrachloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from factories and dry cleaners	zero
 Thallium	0.002	Hair loss; changes in blood; kidney, intestine, or liver problems	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	0.0005
 Toluene	1	Nervous system, kidney, or liver problems	Discharge from petroleum factories	1
 Total Coliforms	5.0 percent ⁸	Coliforms are bacteria that indicate that other, potentially harmful bacteria may be present. See fecal coliforms and <i>E. coli</i>	Naturally present in the environment	zero
 Total Trihalomethanes (TTHMs)	0.080	Liver, kidney, or central nervous system problems; increased risk of cancer	Byproduct of drinking water disinfection	n/a⁹
 Toxaphene	0.003	Kidney, liver, or thyroid problems; increased risk of cancer	Runoff/leaching from insecticide used on cotton and cattle	zero
 2,4,5-TP (Silvex)	0.05	Liver problems	Residue of banned herbicide	0.05
 1,2,4- Trichlorobenzene	0.07	Changes in adrenal glands	Discharge from textile finishing factories	0.07

LEGEND



DISINFECTANT

DISINFECTION
BYPRODUCTINORGANIC
CHEMICAL

MICROORGANISM

ORGANIC
CHEMICAL

RADIONUCLIDES

Contaminant	MCL or TT ¹ (mg/L) ²	Potential health effects from long-term ³ exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) ²
 1,1,1-Trichloroethane	0.2	Liver, nervous system, or circulatory problems	Discharge from metal degreasing sites and other factories	0.2
 1,1,2-Trichloroethane	0.005	Liver, kidney, or immune system problems	Discharge from industrial chemical factories	0.003
 Trichloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from metal degreasing sites and other factories	zero
 Turbidity	TT ⁷	Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing microorganisms such as viruses, parasites, and some bacteria. These organisms can cause short term symptoms such as nausea, cramps, diarrhea, and associated headaches.	Soil runoff	n/a
 Uranium	30µg/L	Increased risk of cancer, kidney toxicity	Erosion of natural deposits	zero
 Vinyl chloride	0.002	Increased risk of cancer	Leaching from PVC pipes; discharge from plastic factories	zero
 Viruses (enteric)	TT ⁷	Short-term exposure: Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
 Xylenes (total)	10	Nervous system damage	Discharge from petroleum factories; discharge from chemical factories	10
LEGEND  DISINFECTANT  DISINFECTION BYPRODUCT  INORGANIC CHEMICAL  MICROORGANISM  ORGANIC CHEMICAL  RADIONUCLIDES				

NOTES

1 Definitions

- Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.
- Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.
- Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

2 Units are in milligrams per liter (mg/L) unless otherwise noted. Milligrams per liter are equivalent to parts per million (ppm).

3 Health effects are from long-term exposure unless specified as short-term exposure.

4 Each water system must certify annually, in writing, to the state (using third-party or manufacturers certification) that when it uses acrylamide and/or epichlorohydrin to treat water, the combination (or product) of dose and monomer level does not exceed the levels specified, as follows: Acrylamide = 0.05 percent dosed at 1 mg/L (or equivalent); Epichlorohydrin = 0.01 percent dosed at 20 mg/L (or equivalent).

5 Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10 percent of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L, and for lead is 0.015 mg/L.

6 A routine sample that is fecal coliform-positive or E. coli-positive triggers repeat samples—if any repeat sample is total coliform-positive, the system has an acute MCL violation. A routine sample that is total coliform-positive and fecal coliform-negative or E. coli-negative triggers repeat samples—if any repeat sample is fecal coliform-positive or E. coli-positive, the system has an acute MCL violation. See also Total Coliforms.

7 EPA's surface water treatment rules require systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their water or meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:

- Cryptosporidium:** 99 percent removal for systems that filter. Unfiltered systems are required to include Cryptosporidium in their existing watershed control provisions.

- Giardia lamblia:** 99.9 percent removal/inactivation
- Viruses:** 99.9 percent removal/inactivation
- Legionella:** No limit, but EPA believes that if *Giardia* and viruses are removed/inactivated, according to the treatment techniques in the surface water treatment rule, *Legionella* will also be controlled.
- Turbidity:** For systems that use conventional or direct filtration, at no time can turbidity (cloudiness of water) go higher than 1 nephelometric turbidity unit (NTU), and samples for turbidity must be less than or equal to 0.3 NTU in at least 95 percent of the samples in any month. Systems that use filtration other than the conventional or direct filtration must follow state limits, which must include turbidity at no time exceeding 5 NTU.
- HPC:** No more than 500 bacterial colonies per milliliter
- Long Term 1 Enhanced Surface Water Treatment:** Surface water systems or ground water systems under the direct influence of surface water serving fewer than 10,000 people must comply with the applicable Long Term 1 Enhanced Surface Water Treatment Rule provisions (e.g. turbidity standards, individual filter monitoring, *Cryptosporidium* removal requirements, updated watershed control requirements for unfiltered systems).
- Long Term 2 Enhanced Surface Water Treatment:** This rule applies to all surface water systems or ground water systems under the direct influence of surface water. The rule targets additional *Cryptosporidium* treatment requirements for higher risk systems and includes provisions to reduce risks from uncovered finished water storages facilities and to ensure that the systems maintain microbial protection as they take steps to reduce the formation of disinfection byproducts. (Monitoring start dates are staggered by system size. The largest systems (serving at least 100,000 people) will begin monitoring in October 2006 and the smallest systems (serving fewer than 10,000 people) will not begin monitoring until October 2008. After completing monitoring and determining their treatment bin, systems generally have three years to comply with any additional treatment requirements.)
- Filter Backwash Recycling:** The Filter Backwash Recycling Rule requires systems that recycle to return specific recycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state.
- 8** No more than 5.0 percent samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or E. coli. If two consecutive TC-positive samples, and one is also positive for E. coli or fecal coliforms, system has an acute MCL violation.
- 9** Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:
 - Halooacetic acids:** dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L)
 - Trihalomethanes:** bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L)

NATIONAL SECONDARY DRINKING WATER REGULATION

National Secondary Drinking Water Regulations are non-enforceable guidelines regarding contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. However, some states may choose to adopt them as enforceable standards.

Contaminant	Secondary Maximum Contaminant Level
Aluminum	0.05 to 0.2 mg/L
Chloride	250 mg/L
Color	15 (color units)
Copper	1.0 mg/L
Corrosivity	Noncorrosive
Fluoride	2.0 mg/L
Foaming Agents	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 threshold odor number
pH	6.5-8.5
Silver	0.10 mg/L
Sulfate	250 mg/L
Total Dissolved Solids	500 mg/L
Zinc	5 mg/L

FOR MORE INFORMATION ON EPA'S
SAFE DRINKING WATER:



visit: epa.gov/safewater



call: (800) 426-4791

ADDITIONAL INFORMATION:

To order additional posters or other ground water and drinking water publications, please contact the National Service Center for Environmental Publications at: **(800) 490-9198**, or email: nscep@bps-lmit.com.



OFFICE OF GROUND WATER
AND DRINKING WATER



HOWARD LAKE CITY COUNCIL MEETING

MARCH 21, 2022

AGENDA ITEM: Consider Scope and Fee for Preliminary Engineering Report for 2023 Street Project

SECTION: New Business

FROM: Nick Haggemiller, City Administrator
Joshua Halvorson, City Engineer

BACKGROUND: The proposed street and utility projects slated for the upcoming years will include a complex combination of funding sources that require a preliminary engineering report (PER) as well as applications submitted. The various applications will determine the City's financial need based on affordability.

The following tasks and deadlines are related to specific funding sources that the city will be seeking to complete the water resource and street & utility projects. Collectively, this product is known as the Preliminary Engineering Report (PER). Once completed and submitted, the actual design development work will begin for the projects.

Project Schedule	
Task	Finish
Scope of Services Approval	March 21, 2022
Task 1: CWRF PPL Application Modification - MPCA	April 22, 2022
Task 2: DWRF PPL Application - MDH	May 6, 2022
Task 3: USDA RD PER Preparation	August 2022
Task 4: Procurement Requirements per USDA	September 2022
Task 5: RD Apply - Application Intake	October 2022

The overall project schedule proposes constant activity, mostly at the engineer and city staff level, from now through an anticipated 2025 completion for all projects.

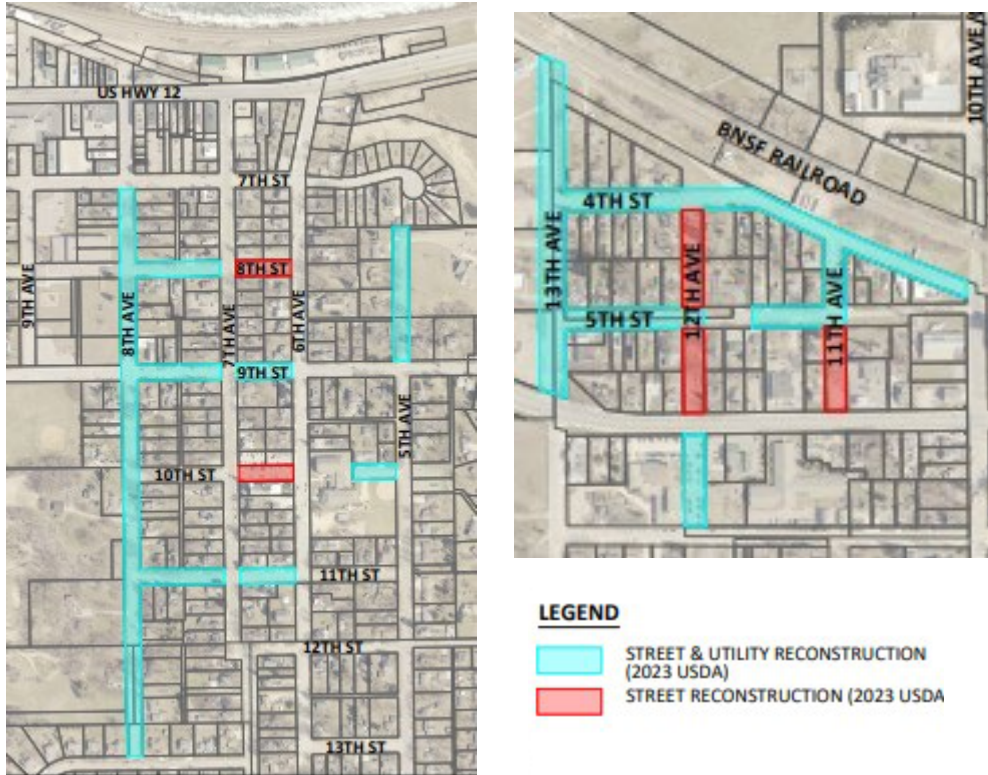
Future Anticipated Milestones	
Initiate Design	September 2022
USDA PER Approval	January 2023
RD Financing & Approvals	April 2023
Finish Design	May 2023
Bid Projects	June 2023
Start Construction	July 2023
Project Completion	December 2025

The PER will include the following broad scope:

- Applications deemed necessary funding
- Preliminary engineering related to funding submissions
- Water Treatment Plant
- Well
- Water Tower
- Street & Utility Reconstruction*

*Street & Utility Reconstruction

About 40% of the City is slated for reconstruction with this project. This follows the core of the city having been reconstructed in 2011 and an additional 25% of the City that is approximately in the middle of the anticipated lifespan of their street & utilities. The following is a map that shows the proposed project area:



DECISION MAKING METRICS:

FINANCIAL: The proposed scope has a fee associated not to exceed \$121,600. This would be incurred and billed using reserves over the next 6 months. Staff is holding regular conversations with our financial advisor on the overall financing for the projects. It is likely that at some point when debt is issued related to the projects, that some or all of the engineering will refund the general fund.

LEGAL: Multiple quotes are not required provided the Professional Services provision of purchasing.

STRATEGIC PLAN: Deliver High Quality Reliable Infrastructure and Public Services.

COUNCIL ACTION REQUESTED: Approve Scope and Fee for Preliminary Engineering Report for 2023 Street Project

ATTACHMENTS:

1. Proposal from BMI for Preliminary Engineering Report 2023 Street & Utility Projects.



Real People. Real Solutions.

2040 Highway 12 East
Willmar, MN 56201-5818

Ph: (320) 231-3956
Fax: (320) 231-9710
Bolton-Menk.com

March 17, 2022

Nick Haggenmiller, City Administrator
City of Howard Lake
625 8th Ave
PO Box 736
Howard Lake, MN 55349

RE: PER Proposal: Water Treatment Facility, Tower, & Phase 2 Utility Improvements
Howard Lake, Minnesota
BMI Project #: OW1.126614

Dear Mr. Haggenmiller:

Bolton & Menk, Inc. is pleased to submit this proposal for completing a Preliminary Engineering Report for the Water Treatment Facility, Tower, & Phase 2 Utility Improvements for the City of Howard Lake. This letter outlines our understanding of the project, proposed scope of services, anticipated project timing, and proposed fees for completing your Preliminary Engineering Report.

If the proposal and the attached Terms of Proposal are acceptable, please return one signed copy to verify your acceptance. When signed, this proposal and the attached terms shall constitute the agreement between the City of Howard Lake and Bolton & Menk, Inc.

Thank you for considering and working with Bolton & Menk, Inc., for your engineering needs! Please review the attached documents and contact me at 320-905-3520 or email me at joshua.halvorson@bolton-menk.com if you have questions or concerns.

Sincerely,

Bolton & Menk, Inc

Joshua J. Halvorson, P.E.

City Engineer

Attachments: Scope of Services
Figure #1 – Project Location Map; Street & Utility Improvements
Figure #2 – PER Report Contents
Terms of Proposal

PROJECT UNDERSTANDING

The City of Howard Lake is undergoing implementation of their Capital Improvement Plan (CIP). Improvements as part of the CIP include the replacement of the City's Water Treatment Facility originally constructed in 1988, water storage replacement of the existing 1947 water tower #1 (south tower) with corresponding well, and the reconstruction of numerous streets and their corresponding sanitary sewer, watermain, and storm sewer utilities. The streets to be reconstructed as part of this plan and CIP are as exhibited in the attached **Figure #1**.

The scope of work included in this proposal will encompass an engineering investigation into these CIP improvements and documented into a preliminary engineering report (PER). This required document is an element needed for obtaining Federal financing options through the United States Department of Agriculture Rural Development (USDA RD) in cooperation with State programs of the Clean Water Revolving Fund (CWRF) and Drinking Water Revolving Fund (DWRF) for granting assistance. The scope of services provided by Bolton & Menk, Inc. are comprehensive in effort to gain financial position through an approved PER for the proposed CIP improvements identified.

SCOPE OF SERVICES

The linear progression of the City to move forward with the proposed CIP Improvements identifies the scope of services that need to be completed to align with Financing agency's fiscal calendars for funding. The tasks contained in this proposal position the City to become proactive in maximizing eligibility for infrastructure funding. Further detail on the milestone completion date for the scope of services are included in the Project Schedule of this proposal. Bolton & Menk, Inc. will provide the following scope of work separated into the following tasks:

Task 1 - CWRF Fund Project Priority List (PPL) Modification

The Clean Water Revolving Fund is a program specifically geared to sanitary sewer improvements and administered through the MPCA. The proposed CIP project areas as illustrated in **Figure #1** contain sanitary sewer collection system improvements that are eligible for financing and granting opportunities due to this condition. The City of Howard Lake currently is on the PPL for the CWRF that incorrectly identifies the CIP Improvements.

Bolton & Menk, Inc. will notify and relay to the MPCA the current project information to properly identify and rank the proposed improvements to remain on the CWRF PPL. This includes providing updated project scope of the project, coordinating the City's CIP improvements with the MPCA engineer, and deriving the estimated sanitary sewer costs for such improvements that are eligible for consideration with these funds.

Task 2 – DWRF PPL Application

Similarly, the DWRF is a program specifically geared for funding to water system components of a project and administered through the MDH. To be eligible for finance or granting opportunities, the PPL application will be completed for the DWRF due by May 6, 2022. Application for this fund will include combining the watermain reconstruction needs in the areas as identified in **Figure #1**, water storage, well, and water treatment facility.

Bolton & Menk, Inc. will utilize the completed Water Treatment Facility report information and derive the additional information needed for the watermain reconstruction to be included in the PPL application. The PPL application will be completed per the MDH submittal checklist. This includes a narrative of the project detailing the project, costs, and schedule. Upon compiling and combining this information, the application will be submitted to get the proposed CIP project on DWRF PPL.

Task 3 – USDA RD PER Preparation

A PER is a planning document required by Federal agencies as part of the process of obtaining financial assistance for development of drinking water, wastewater, solid waste, and stormwater projects. The PER describes the proposed project from an engineering perspective, analyzes alternatives to the proposal, defines project costs, and provides information critical to the underwriting process.

Bolton & Menk, Inc. will prepare the PER to satisfy the requirements of USDA Bulletin 1780-2. The USDA RD PER is an exhaustive seven-section report that is outlined in the attached **Figure #2 – PER Report Contents**. Bolton & Menk Inc.'s involvement will continue until approval of the PER by RD.

The PER will also include an Environmental Report (ER), which will review and determine impacts to the physical and social environment associated with the proposed CIP improvements. Bolton & Menk, Inc. will prepare the ER to satisfy the requirements of USDA Bulletin 1794. Our services include performing field and office research as to the physical and social environmental impacts that result from the proposed project and provide a summary report of the findings for agency review.

In the preparation of the PER, Bolton & Menk, Inc. has assumed that Geotechnical Services and Sewer Televising needs will be contracted directly with the City. However, Bolton & Menk, Inc. will identify and assist in the solicitation for these services as this information is needed to complete the PER.

Task 4 – Procurement Requirements per USDA

Through the process of completing the PER, Bolton & Menk, Inc. will handle the itemized procurement conditions required by USDA RD. These tasks include:

- USDA RD 1780.19 – Perform Public Hearing on Improvements to discuss the proposed CIP project, including economic and environmental impacts, service area, alternatives to the project, and potential funding sources, including USDA Rural Development. In addition, Bolton & Menk, Inc. will produce “Notice of Intent to File an Application” with USDA RD. Such notice will then be published and distributed for any written comments.
- USDA RD 1780.39 - Complete solicitation requirements for obtaining qualified and competent professionals to complete the proposed CIP improvements from design through construction. This includes public notice of services & record of qualifications.

Task 5 – RD Apply – Application Intake

RD Apply is an application intake system that allows the city to apply for loans and grants for Rural Utility Services (RUS) Programs through USDA. This is an electronic application format that provides convenience, identity security, and reduced paper consumption. Considering the nature of the proposed CIP Project being Water & Environmental, RD Apply is the current program for this RUS USDA application.

Bolton & Menk, Inc. will complete and support the City in completing RD Apply sectional material as it applies to completed PER items. At any time during the application process, Bolton & Menk, Inc. and RUS program staff, can display whether a section is complete. This allows the status of any section within the application to be seen at any time and act accordingly.

SCHEDULE

Bolton & Menk, Inc. will initiate providing the scope of services immediately following execution of this proposal. The scope of services within this proposal will take approximately seven (7) months to complete and are aligned to meet the fiscal funding deadlines of the CWRF, DWRF, and USDA RD. Bolton & Menk, Inc. proposes to meet the following schedule:

Project Schedule	
Task	Finish
Scope of Services Approval	March 21, 2022
Task 1: CWRP PPL Application Modification - MPCA	April 22, 2022
Task 2: DWRP PPL Application - MDH	May 6, 2022
Task 3: USDA RD PER Preparation	August 2022
Task 4: Procurement Requirements per USDA	September 2022
Task 5: RD Apply - Application Intake	October 2022
Future Anticipated Milestones	
Initiate Design	September 2022
USDA PER Approval	January 2023
RD Financing & Approvals	April 2023
Finish Design	May 2023
Bid Projects	June 2023
Start Construction	July 2023
Project Completion	December 2025

The completion of the proposed scope of services is needed for achieving future anticipated milestones of the proposed CIP as illustrated in this proposal. This schedule will be adjusted as progress of tasks, permitting, and approvals drive the completion of subsequent project tasks. The owner will be made aware of any deviations to this schedule that effect or jeopardize the intent of the project or change the scope of this proposal.

FEES

Bolton & Menk, Inc. understands the importance of delivering project tasks on time and within budget. We closely monitor our time, budget, and efficiency of our staff to provide value and savings to our clients. Based on our experience working with the City of Howard Lake, and with similar projects, we are confident in the level of effort required to deliver a successful project.

Bolton & Menk, Inc. proposes to provide the described work on an HOURLY NOT TO EXCEED contract up to a total fee of **\$121,600.00**. Hours will be billed monthly only for work completed on the project. If the project takes less time, the City will be billed only for hours worked unless given approval to proceed with additional work outside our scope of services. Each task is broken down by anticipated hours and associated fee:

Scope of Services		
Task	Hours	Estimated Fees
Task 1: CWRP PPL Modifications - MPCA	32	\$4,100
Task 2: DWRP PPL Application - MDH	60	\$8,400
Task 3: USDA RD PER Preparation	640	\$96,000
Task 4: Procurement Requirements per USDA	40	\$6,400
Task 5: RD Apply - Application Intake	48	\$6,700
Total	820	\$121,600

The above fees represent approximately 820 total hours of engineering and technical time for consideration by evaluating the existing facilities, developing options, financial considerations, preparing the plan and report, attending meetings, and presenting the findings to the City of Howard Lake for your Water Treatment Facility, Water Tower, Well, & Ph. 2 Street & Utility Reconstruction areas.

Bolton & Menk, Inc. understand the proposed scope of work is dynamic and subject to modification, our scope of services and estimated fee is open to further negotiation. Fees that are normal and customary expenses associated with operating a professional business will not be charged separately. Unless otherwise agreed, the above rates include vehicle and personal expenses, mileage, telephone, and routine expendable supplies; and no separate charges will be made for these activities and materials.

ACCEPTANCE

The undersigned represents that it is the City of Howard Lake or has been authorized to accept this Proposal on behalf of the City of Howard Lake. The City of Howard Lake agrees to the Terms and Conditions as stated above and as attached to this Proposal. Unless otherwise replaced or modified by a separately executed, written Agreement, this Proposal shall constitute the full and complete agreement between the City of Howard Lake and Bolton & Menk, Inc.

Accepted by:

Print Name/Title

Signature and Date

City of Howard Lake

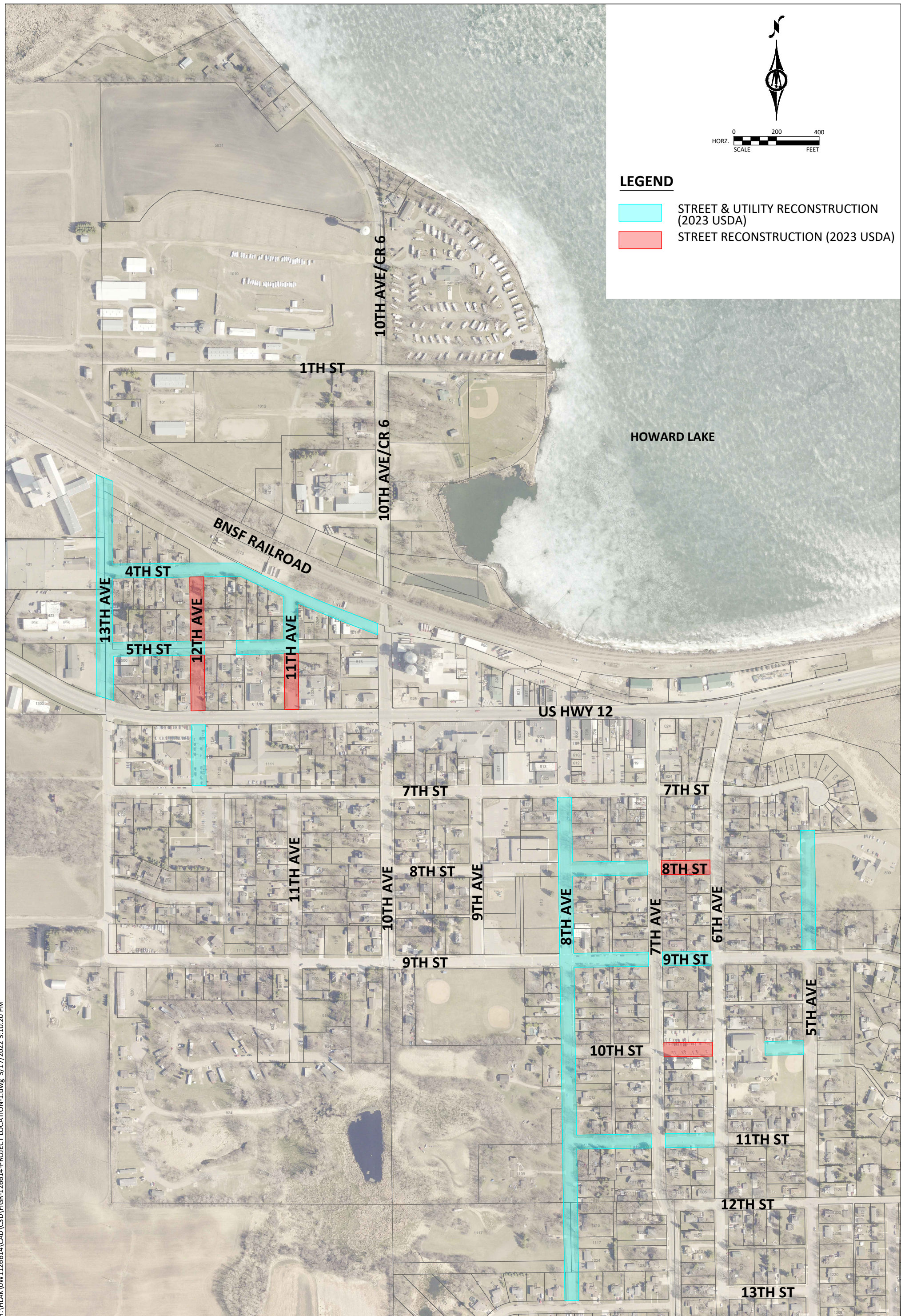

**BOLTON
& MENK**

FIGURE #2 – PER Report Contents

OUTLINE OF A PRELIMINARY ENGINEERING REPORT
USDA Bulletin: 1780-2

- 1) PROJECT PLANNING
 - a) Location
 - b) Environmental Resources Present
 - c) Population Trends
 - d) Community Engagement
- 2) EXISTING FACILITIES
 - a) Location Map
 - b) History
 - c) Condition of Existing Facilities
 - d) Financial Status of any Existing Facilities
 - e) Water/Energy/Waste Audits
- 3) NEED FOR PROJECT
 - a) Health, Sanitation, and Security
 - b) Aging Infrastructure
 - c) Reasonable Growth
- 4) ALTERNATIVES CONSIDERED
 - a) Description
 - b) Design Criteria
 - c) Map
 - d) Environmental Impacts
 - e) Land Requirements
 - f) Potential Construction Problems
 - g) Sustainability Considerations
 - i) Water and Energy Efficiency
 - ii) Green Infrastructure
 - iii) Other
 - h) Cost Estimates
- 5) SELECTION OF AN ALTERNATIVE
 - a) Life Cycle Cost Analysis
 - b) Non-Monetary Factors
- 6) PROPOSED PROJECT (RECOMMENDED ALTERNATIVE)
 - a) Preliminary Project Design
 - b) Project Schedule
 - c) Permit Requirements
 - d) Sustainability Considerations
 - i) Water and Energy Efficiency
 - ii) Green Infrastructure
 - iii) Other
 - e) Total Project Cost Estimate (Engineer's Opinion of Probable Cost)
 - f) Annual Operating Budget
 - i) Income
 - ii) Annual O&M Costs
 - iii) Debt Repayments
 - iv) Reserves
- 7) CONCLUSIONS AND RECOMMENDATIONS

**Terms of Proposal
Bolton & Menk, Inc.**

The accompanying Proposal (hereinafter referred to as "Proposal") is subject to the following terms and conditions. These Terms of Proposal (hereinafter referred to as "Terms") are an integral part of the accompanying Proposal as if stated directly therein. No change or deviation from these Terms will be binding without the written approval of Bolton & Menk, Inc. (BMI). Such changes may require an adjustment in the proposed fee, schedule, or scope of Proposal.

A. Services: BMI proposes to perform the services ("Services") outlined in the Proposal for the stated fee arrangement. Changes required by the CLIENT or other controlling entities (regulatory agencies, contractors, courts, etc.) from the scope or schedule described in the Proposal are "Additional Services" and will be invoiced on an hourly basis in addition to the stated fee arrangement.

B. Information from Client: The CLIENT shall place any and all previously acquired information in its custody at the disposal of BMI for its use. This information should include current site property descriptions (from abstract, title opinion or title commitment); other legal documents affecting the site; copies of previous surveys, maps, utility locates, engineering studies and plans; existing or required soils and geotechnical reports; governmental, regulatory and utility reviews and determinations; and all other pertinent information. BMI may rely on accuracy of CLIENT provided information. CLIENT shall promptly inform BMI of any alleged defects in the Services.

C. Access to Site: The CLIENT will guarantee access to and make all provisions for entry upon public portions of the project and reasonable efforts to provide access to private portions and pertinent adjoining properties as needed for the performance of Services

D. Client Provided Services. BMI's Services do not include legal, insurance counseling, accounting, independent cost estimating, financial advisory or municipal advisor services and the CLIENT shall provide such services as may be required for completion of the project. The CLIENT may hire, at its discretion, when requested by BMI, an independent test company to perform laboratory and material testing services, and soil investigation that can be justified for proper completion of BMI's Services. If CLIENT elects not to hire an independent test company, CLIENT shall provide BMI with guidance and direction on completing those aspects of BMI's Services that require additional testing data.

E. Permits. The CLIENT will obtain any and all regulatory permits required for the proper and legal execution of the Project. BMI will assist CLIENT with permit preparation and documentation to the extent described in the attached Proposal. BMI makes no representations as to acceptability or approvability of the project or permit applications. CLIENT's obligation for payment of fees owed BMI is not contingent upon project approval

F. Standard of Care: Professional services provided under this Agreement will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of BMI's profession currently practicing under similar conditions. **BMI makes no warranties, expressed or implied, or otherwise with respect to any services performed or furnished.**

G. Utilities: Except as otherwise explicitly stated in the proposal, if utility surveys are included in scope of services, utilities will be located from available utility records, utility company locates and surface evidence of underground improvements. Some subsurface improvements may not be disclosed by such methods and CLIENT assumes responsibility for cost of exploratory excavations and other work to assure utility locations.

H. Opinions or Estimates of Project Costs: Where provided by the BMI as part of the Services or otherwise, opinions or estimates of construction cost will generally be based upon public construction cost information. Since BMI has no control over the cost of labor, materials, competitive bidding process, weather conditions and other factors affecting the cost of construction, all cost estimates are opinions for general information of the CLIENT and BMI does not warrant or guarantee the accuracy of construction cost opinions or estimates.

I. Construction Phase Services: It is agreed that BMI and its representatives shall not at any time supervise, direct, control, or have authority over any contractor's work, nor shall BMI have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, or the safety precautions and programs incident thereto, for security or safety at any project site, nor for any failure of a contractor to comply with Laws and Regulations applicable to that contractor's furnishing and performing of its work. BMI shall not be responsible for the acts or omissions of any contractor. CLIENT acknowledges that the on-site contractor(s) are solely responsible for construction site safety programs and their enforcement.

J. Ownership of Documents: Drawings and Specifications and all other documents (including electronic and digital versions of any documents) prepared or furnished by BMI are instruments of service in respect to the Project and BMI shall retain an

ownership interest therein. Upon payment of all fees owed to the CONSULTANT, the CLIENT shall acquire a limited license in all identified deliverables (including Reports, Plans and Specifications) for any reasonable use relative to the Project and the general operations of the CLIENT.

K. Reuse of Documents: CLIENT may make and disseminate copies for information and reference in connection with the use and maintenance of the project by the CLIENT. However, such documents are not intended or represented to be suitable for reuse by CLIENT or others on extensions of the Project or on any other project. Any reuse by CLIENT or, any other entity acting under the request or direction of the CLIENT, without written verification or adaptation by BMI for such reuse will be at CLIENT'S sole risk and without liability or legal exposure to BMI and CLIENT shall indemnify and hold harmless BMI from all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from such reuse.

L. Billings and Payments: Payment to BMI will be made by the CLIENT upon billing at intervals not more often than monthly. If CLIENT fails to make any payment for undisputed services and expenses within 45 days after date of the invoice, a service charge of one and one-half percent (1.5%) per month or the maximum rate permitted by law, whichever is less, will be charged on any unpaid balance. In addition, if the CLIENT fails to make payment for undisputed services and expenses within 60 days after the date of the invoice, BMI may, upon giving seven days' written notice to CLIENT, suspend services and withhold project deliverables due until BMI has been paid in full for all past due amounts for undisputed services, expenses and charges, without waiving any claim or right against the CLIENT and without incurring liability whatsoever to the CLIENT

M. Certificates of Insurance: BMI will maintain, at its expense, statutory worker's compensation insurance coverage, automobile liability insurance, commercial general liability insurance and professional liability coverage for claims arising from bodily injury, death or property damage which may arise from the negligent performance by BMI or its employees. BMI will, upon request, furnish Certificates of Insurance documenting terms of coverages. BMI will not be required to extend coverages beyond those which are usual and customary for similar firms practicing similar surveying and engineering services unless BMI is reimbursed for additional premium expenses.

N. INDEMNIFICATION OF CLIENT: BMI shall indemnify and hold harmless CLIENT from losses, damages, and judgments (including reasonable attorneys' fees and expenses of litigation) arising from claims or actions relating to the proposed services, provided that any such claim, action, loss, damages, or judgment is attributable

to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, but only to the extent caused by the negligent acts and omissions of BMI or its employees, agents, or subconsultants.

O. INDEMNIFICATION OF BMI: CLIENT shall indemnify and hold harmless BMI from losses, damages, and judgments (including reasonable attorneys' fees and expenses of litigation) arising from claims or actions relating to the proposed services, provided that any such claim, action, loss, damages, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, but only to the extent caused by the negligent acts and omissions of the CLIENT or its employees, agents, or other consultants

P. Waiver of Claims: To the fullest extent permitted by law, Client and BMI waive against each other, and the other's employees, partners, officers, agents, insurers, and subcontractors, claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or any way related to this Proposal and the Services, from any cause or causes. CLIENT waives claims against BMI individual employees and agrees any claim, demand or suit shall be asserted only against the BMI corporate entity.

Q. Jurisdiction and Dispute Resolution: All agreements executed for performance of the Services are to be governed by the law of the State of Minnesota. Any claims or disputes made during or after the performance of services between BMI and the CLIENT shall first be submitted to mediation for resolution prior to bringing an action in a court of competent jurisdiction.

R. Agreement: If the Proposal is accepted, the CLIENT and BMI will enter into an Agreement incorporating the accompanying Proposal, these Terms and such additional terms and conditions as may be mutually acceptable to BMI and CLIENT. In the absence of a separate, executed written agreement, the accompanying Proposal and these Terms of Proposal shall constitute the whole and complete agreement between BMI and the CLIENT.

S. Termination of Services: Any agreement created as provided herein may be terminated by the CLIENT or BMI should the other fail to perform its obligations hereunder; or, by BMI if the presence of an unknown or undisclosed federally, state or locally regulated hazardous material is encountered. In the event of termination, the CLIENT shall pay BMI for all services rendered to the date of termination, all reimbursable expenses, and reimbursable termination expenses.

T. Withdrawal of Proposal: This Proposal constitutes a non-binding offer to perform services and BMI reserves the right to withdraw or modify this proposal, without liability to the CLIENT, at any time prior to execution of a signed agreement.



HOWARD LAKE CITY COUNCIL MEETING

March 21, 2022

AGENDA ITEM: SET UP SPRING CLEAN UP DATES AND TERMS

SECTION: New Business

FROM: Meagan Theisen, Assistant City Administrator

BACKGROUND: City Staff will set up dumpsters at Memorial Park, same as the last couple years, for people to bring various items over the course of a week, rather than just one day. There will be a staff member there Monday through Saturday to monitor what was being dumped and to collect payments.

Proposed 2022 Spring Clean-up guidelines –

- May 14th - May 21st 2022
- Monday – Friday 1PM to 7PM & Saturdays 8AM – 12PM
- City of Howard Lake residents only, ID with proof of residency to be checked at the gate.

Proposed fees:

<u>Accepted:</u>	<u>Accepted:</u>	<u>PROHIBITED</u>
Small Load - \$10.00	Appliances - \$10.00	Paint
Medium Load - \$15.00	Small Electronics - \$10.00	Hazardous Chemicals
Oversized Load - \$20.00	Monitors/Tube/ Console TV - \$50.00	Construction Materials
Couch/Upholstered - \$25.00	Flat Screen TV - \$10 + \$1/Inch	Fluorescent Tubes
Small Upholstered Chair - \$10.00	Scrap Metal - FREE	Commercial/Contractors
Mattress - \$30.00		*Township Residents
Box Spring - \$30.00		
Tires without rim - \$5.00		
Tire with rim - \$10.00		

RECOMMENDATION:

Staff is recommending to hold the 2022 Spring clean-up for one week, including two Saturday morning May 14th - May 21st.

Staff will advertise the clean-up dates on the City website, Facebook, and the Herald Journal.

COUNCIL ACTION REQUESTED: Set dates and time for the 2022 Spring clean up and approve fees.

ATTACHMENTS: N/A



HOWARD LAKE CITY COUNCIL MEETING

March 21, 2022

AGENDA ITEM: Consider Resolution Reestablishing a Designated Absentee Voting and Polling Location

SECTION: New Business

FROM: Megan Theisen, Assistant City Administrator

BACKGROUND: In 2017, the State Legislature amended Minnesota Statute § 204B.16 Subd. 1 requiring all municipalities to designate a polling place annually by December 31 of each year. The City designated City Hall for the 2022 election. The City also need to designate an absentee polling location. Moving forward, the absentee polling location and general polling location will be approved, at the same time, by resolution in the fall of each year.

DECISION MAKING METRICS:

FINANCIAL: N/A

LEGAL: This action follows state statute concerning polling places.

STRATEGIC PLAN: Deliver High Quality, Reliable Infrastructure and Public Services

COUNCIL ACTION REQUESTED: Adopt Resolution 22-08 Designating an Absentee Voting

Location. **ATTACHMENTS:**

1. Resolution 22-08 RESOLUTION REESTABLISHING A DESIGNATED ABSENTEE VOTING AND POLLING LOCATION

**CITY OF HOWARD LAKE
RESOLUTION 22-08**

**RESOLUTION REESTABLISHING A DESIGNATED
ABSENTEE VOTING AND POLLING LOCATION**

WHEREAS, Minnesota Statute § 204B.16 Subd. 1 was amended by the Minnesota State Legislature during its 2017 regular session to require all municipalities to annually designate a polling place by December 31 of each year for the following calendar year;

WHEREAS, the City of Howard Lake designates City Hall at 625 8th Avenue, Howard Lake as the polling place and absentee voting location for Precinct 1;

WHEREAS, Howard Lake City Staff administering ballots are not party affiliated;

THEREFORE BE IT RESOLVED, that the City of Howard Lake designates City Hall at 625 8th Avenue, Howard Lake as the polling place for Precinct 1 for the 2022 calendar year.

PASSED AND ADOPTED this 21st day of March 2022.

Peter Zimmerman, Mayor

ATTEST:

Nicholas Haggemiller, City Administrator-Clerk



HOWARD LAKE CITY COUNCIL MEETING

MARCH 21, 2022

AGENDA ITEM: Consider Purchase of 2024 Plow Truck

SECTION: New Business

FROM: Nick Haggemiller, City Administrator
Jared Merges, Public Works Lead

BACKGROUND: The city has adopted a Capital Improvement Plan (CIP) that details the proposed purchases or improvements for the next ten year period. The plan details a new plow truck purchase as the next/most pressing capital purchase of public works.

The City owns two plow trucks, a 1996 Ford Plow Truck and a 2006 Freightliner. Both trucks are arguably at the end of their useful life. However, the City has expensed a tremendous amount of money in repairs to the 2006 Freightliner over the last several years including rebuilding the transmission and relentless smaller repairs.

Quotes

We anticipate two big purchases to build out one plow truck. The size of the two individual purchases are below the threshold that require sealed bids. Therefore, multiple quotes were sought for each the chassis and the plow equipment. All quotes sought were also listed on the State bid or Sourcwell Joint Powers Agreement.

Public Works Lead Jared Merges gathered information for the purchase. Specifically, he sought quotes for:

- Single axle trucks
- Familiarity of equipment with staff
- Height/size etc. that best fits within our facility and low bridges
- Add-on for brine system
- Ability to service locally

2024 PLOW TRUCK					
CHASIS			PLOW EQUIPMENT		
VENDOR	BRAND	COST	VENDOR	COST	TOTAL
Nuss Trucks	Mack	\$116,141	Towmaster	\$127,564	\$243,705
Boyer Trucks	Western Star	\$109,941	Aspen	\$152,248	\$262,189

Pending options and combinations of chassis and plow equipment, the total package ranged from \$237,508 to \$275,141. Staff is recommending the Mack Truck (\$116,141) plus Towmaster Plow Equipment (\$127,564) for a total of \$243,705.

In addition to the information listed above for the base quotes, the following will be added

- Allow wheels (Front/Back) \$578
- Increased Horsepower \$332
- Premium Interior \$795
- 5 year engine warranty \$1,900
- Misc Electronics (estimate) \$2,500
- Lettering \$1,000

Terms

- Vendors will not require payment until the truck is manufactured, equipped and delivered to Howard Lake.
- With an order placed in April 2022, we would anticipate delivery in Late 2023

DECISION MAKING METRICS:

FINANCIAL: \$243,705 for the combination listed + an additional estimated \$7,105 in features

The City lists the purchase but assumes financing the purchase using equipment certificates. Due to the long leadtime that may better position the city to use cash, we are currently working with the city's financial advisor and reviewing other CIP purchases to determine if it is best left to be financed or use reserves.

COST NOTE: The estimated cost for this is about \$15,000 more than previously quoted about 6 months ago. We are being forewarned of steady and steep price increases with every month we delay purchasing.

LEGAL: The two separate purchases are below the threshold that requires sealed bids. Multiple quotes were sought and received as well as confirmation that the prices quoted are listed on the state purchasing bid or joint powers buying cooperative (Sourcewell.)

STRATEGIC PLAN:

1. Deliver High Quality Reliable Infrastructure
2. Maintain Fiscally Responsible City Operations
3. Retain Talented Public Servants

COUNCIL ACTION REQUESTED: Approve the purchase of the Mack Truck

ATTACHMENTS:

1. Nuss Quote
2. Boyer Quote
3. Towmaster Quote
4. Aspen Quote